

Chen-Northern, inc
Judith Mountain
Reclamation
Project, DSL-AMRB
92-006, Warm
Springs Mining
District, Fergus

FINAL REPORT

JUDITH MOUNTAIN RECLAMATION PROJECT

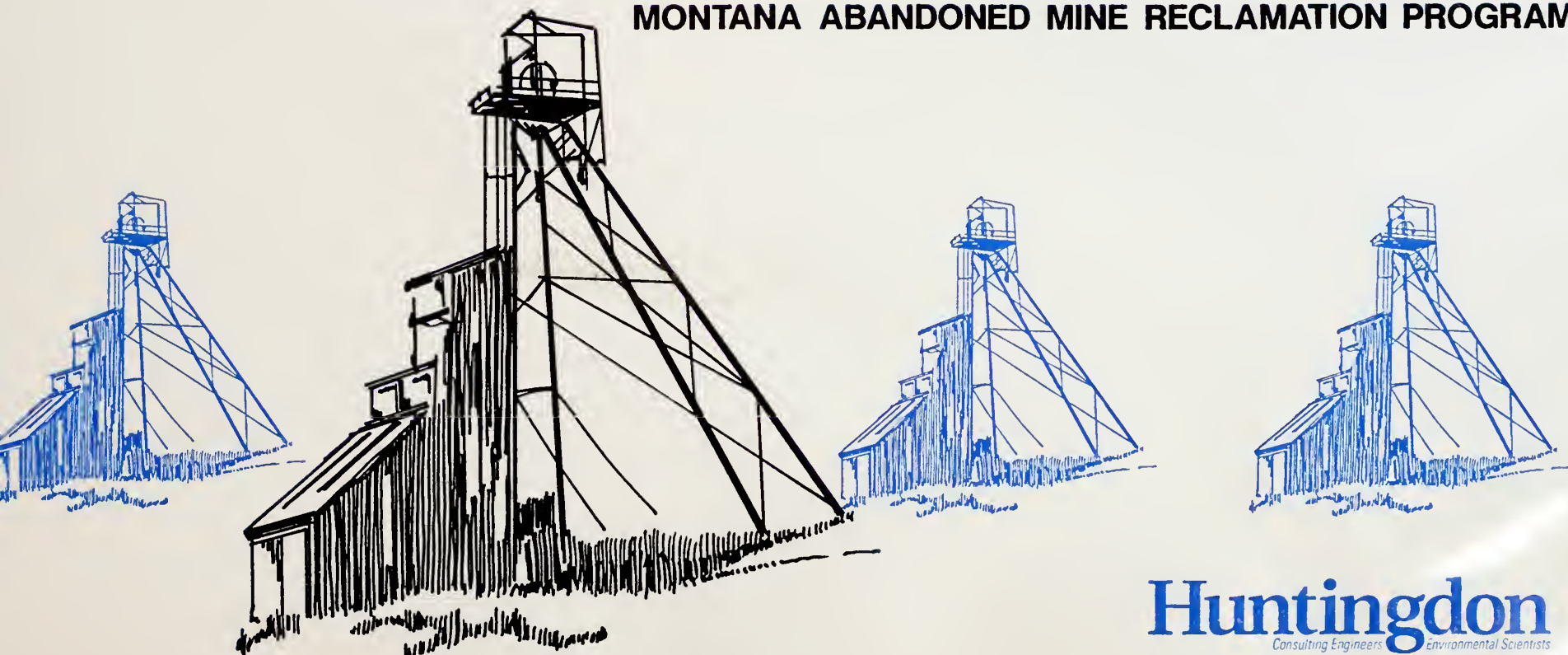
Warm Springs Mining District

Fergus County, Montana

DSL-AMRB 92-006

September 1993

MONTANA ABANDONED MINE RECLAMATION PROGRAM



Huntingdon
Consulting Engineers Environmental Scientists

Chen-Northern, Inc.

FINAL REPORT
JUDITH MOUNTAIN RECLAMATION PROJECT
DSL-AMRB 92-006
WARM SPRINGS MINING DISTRICT
FERGUS COUNTY, MONTANA

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FINAL REPORT

**JUDITH MOUNTAIN RECLAMATION PROJECT
DSL-AMRB 92-006**

**WARM SPRINGS MINING DISTRICT
FERGUS COUNTY, MONTANA**

Prepared for:

Department of State Lands
Abandoned Mine Bureau

Prepared by:

Chen-Northern, Inc.
1610 B Street
Helena, MT 59604

September, 1993



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1.0 INTRODUCTION

Hard rock mining has taken place in Montana since 1862 and was essentially unregulated from a reclamation standpoint for over one hundred years. As a result, thousands of unsecured shafts and adits are located in mining districts throughout the state. There are many hazards associated with these mine openings including, but not limited to, bad air, falling rock and cave-ins. The purpose of the Judith Mountain Reclamation Project was to abate some of these hazards located in the Warm Springs Mining District of Fergus County, Montana. This project was one of a continuing series of hazardous mine opening closure projects completed by the Montana Abandoned Mine Reclamation Bureau (AMRB). Project reclamation was completed during the fall of 1992 and the spring of 1993.

1.1 SITE DESCRIPTION

The sites included in the Judith Mountain Reclamation Project are located in or near residential or recreational areas, within historic areas, or close to public roads. All mine openings included in this project are considered hazardous to public safety. The shafts involved were deep enough to prevent unaided escape upon entry. Adits were accessible to the curious, exposing dangerous underground workings and unknown hazards.

1.2 SITE LOCATIONS

The Warm Springs Mining District is located in the Judith Mountains which lie northeast of Lewistown, Montana. The Judith Mountain Reclamation Project included 64 openings at 25 sites. Legal descriptions of all sites included in the project are listed in Table 1-1. The locations of all abandoned mine sites included in this project are shown on the access, site, and detail maps contained in Appendix A.

The access map shows the general location of each site and the site and detail maps show the site location in greater detail. Each site is keyed on the maps by a unique Problem Area Number (PA No.). The site and detail maps are cross referenced by PA No. and Map No. on the access map cross-reference table (Table A-1) so that the location of the individual sites can be easily located.

TABLE 1-1

JUDITH MOUNTAIN RECLAMATION PROJECT

SITE LOCATIONS

PA NO.	COUNTY	MINING DISTRICT	SITE NAME	LEGAL DESCRIPTION
14-003	Fergus	Warm Springs	War Eagle	T16N R20E S07 SE NW
14-007	Fergus	Warm Springs	Gilt Edge	T16N R20E S18 SE
14-023	Fergus	Warm Springs	Western Mines #1	T16N R19E S11 NW NE
14-026	Fergus	Warm Springs	Black Bull	T16N R20E S07 NW SE
14-029	Fergus	Warm Springs	Western Mines #2	T16N R19E S11 NW NE
14-030	Fergus	Warm Springs	Western Mines #3	T16N R19E S11 NW NE
14-031	Fergus	Warm Springs	Western Mines #4	T16N R19E S11 NW NE
14-032	Fergus	Warm Springs	New Year	T16N R19E S16 SW NE
14-033	Fergus	Warm Springs	Lower New Year	T16N R19E S16 SW NE
14-034	Fergus	Warm Springs	New Year Subsidence	T16N R19E S16 SW NE
14-035	Fergus	Warm Springs	New Year Gulch Mine	T16N R19E S16 NW NE
14-038	Fergus	Warm Spring	Devils Canyon #1	T16N R19E S02 SW SW
14-043	Fergus	Warm Springs	Armell Creek #1	T17N R20E S18 NE SE
14-045	Fergus	Warm Springs	E Fk Armell #2	T17N R20E S15 NW SW
14-067	Fergus	Warm Springs	East Fork #5	T17N R20E S22 SE SE
14-068	Fergus	Warm Springs	East Fork #4	T17N R20E S22 SE SE
14-069	Fergus	Warm Springs	East Fork #6	T17N R20E S22 NE NW
14-071	Fergus	Warm Springs	Red Mountain	T17N R20E S20 NE SE
14-075	Fergus	Warm Springs	Virgin Gulch #1	T16N R20E S18 NW NE
14-076	Fergus	Warm Springs	Upper Ox Frame Gulch	T16N R20E S18 SW SE
14-093	Fergus	Warm Springs	Virgin Gulch #2	T16N R20E S18 NE NW
14-095	Fergus	Warm Springs	Upper New Year	T16N R19E S16 SE NW
14-096	Fergus	Warm Springs	Crystal Cave	T16N R19E S16 SE NE
14-098	Fergus	Warm Springs	Moonlight	T16N R20E S19 SE NE
14-099	Fergus	Warm Springs	New Year Gulch East #3	T16N R19E S15 SW NW

1.3 PROJECT OBJECTIVES

The Judith Mountain Reclamation Project was designed and executed with the intent of eliminating accidental or unauthorized entry to mine openings that exposed unknown hazards. Sites were selected from the non-coal database inventory and field site investigations. Backfilling was the preferred reclamation option for closing hazardous adits and shafts. However, many landowners did not want permanent closure of their abandoned

mine openings. Alternative methods such as steel grates, culverts, adit doors, warning signs, and fencing were utilized, at the claimant's request, to preserve access to specific mine openings.

1.4 MINING DISTRICT HISTORY

The discovery of gold in the Judith Mountains came almost twenty years after the discovery of gold in southwest Montana. In 1880 placer gold was found in Alpine Gulch near the historic mining town of Maiden and lode gold deposits were later discovered in 1881. By 1882, the first stamp mill was built at the Collan Mine, two miles from Maiden. The introduction of the cyanide leaching process in 1893 made possible the extraction of gold from low grade ore. This process resulted in a surge of gold mining activity in the Judith Mountains from 1893 to the turn of the century. The Gilt Edge Mine became a big producer and a host of other mines soon followed. Before 1901 the production of gold in the Judith Mountains was approximately three million dollars.

By the turn of the century, higher costs of processing the ores and the depletion of higher grade ores slowed the production of gold in the Judith Mountains. By 1916, most large mining operations such as the Gilt Edge Mine, the Cumberland, Gold Reef, Maginnis and Spotted Horse were shut down. The only other period of substantial mining activity began in 1933 when the price of gold increased; however, in 1943 government order L-208 terminated gold mining activities during World War II. Since the end of World War II, gold mining activities in the Warm Springs mining district has been limited and only a small amount of gold has been mined. A total of approximately 70 mines and prospects have produced intermittently in the Judith Mountains since 1883.

2.0 PROJECT PLANNING AND CONSTRUCTION

The following people/firms have contributed to the coordination, design, execution, and inspection of the Judith Mountain Reclamation Project:

Project Coordination & Design: Chen-Northern, Inc.

Engineering Plan Preparation: Chen-Northern, Inc.

Contractor: DeBuff Drilling Company, Inc.
Marvin DeBuff - Owner
Rod DeBuff - Superintendent

Quality Control Inspection: Chen-Northern, Inc.
Jesse Whitford, Project Inspector
Jeremiah B. Bowser, P.E., Project Engineer

AMRB Project Manager: Dan Koszuta
Department of State Lands
Abandoned Mine Reclamation Bureau

3.0 CHRONOLOGICAL LISTING OF EVENTS

Construction activities related to the Judith Mountain Reclamation Project commenced on October 26, 1992. Construction activities were shut down during the winter months; activities resumed on April 21, 1993. The contractor performed all construction activities according to contract specifications and within the contract period. The following sections describe the sequence of events for the project.

3.1 PRE-BID CONFERENCE

A pre-bid conference was held on Tuesday, July 21, 1992, at the Montana Department of State Lands in Helena. A slide show was presented to acquaint prospective bidders with site conditions since it was not practical for most contractors to visit each site. The slide presentation included a narrative describing site access and construction considerations for specified reclamation.

3.2 PROJECT BIDS

Montana Department of State Lands personnel publicly opened bids for the Judith Mountain Reclamation Project (DSL-AMRB: 92-006) on July 30, 1992. The three lowest bids are presented below. Complete bid tabulation results are presented as Appendix B.

♦	DeBuff Drilling Company, Inc., Lewistown, MT	\$ 91,425.00
♦	Baxter Construction, Billings, MT	\$112,892.50
♦	Sharbono Construction, Helena, MT	\$118,507.90

3.3 PROJECT CHRONOLOGY

The Judith Mountain Reclamation Project was completed during the fall of 1992 and the spring of 1993 within the contract period. The following chronology presents the sequence of events that led to completion of the project.

Notice of Award:	September 2, 1992
Notice to Proceed:	October 14, 1992
Construction Start-up:	October 26, 1992
Winter Shut-down:	November 2, 1992
Spring Start-up:	April 12, 1993
Substantial Completion:	June 3, 1993
Final Acceptance:	June 17, 1993

4.0 PROJECT CONSTRUCTION

4.1 DESCRIPTION OF PROJECT PLAN

The Judith Mountain Reclamation Project was designed and implemented with the intent of eliminating accidental or unauthorized entry to hazardous mine openings. These openings exposed unknown hazards at a number of abandoned hard rock mines.

Backfill was recommended for all mine openings to permanently eliminate the hazards associated with abandoned adit and shaft openings. However, many landowners and/or claimants would not allow closure by backfill, so closure methods allowing access to the mine openings (i.e. steel grates, culverts, or adit doors), warning signs or farm type 5-wire fences were installed. These alternative closure methods prevent accidental entry but are semi-permanent in nature and are subject to vandalism.

Only one steel grate system was required as a closure method for a shaft included in the Judith Mountain Reclamation Project. The grate was fabricated by the contractor. One concrete cone was installed at the Gilt Edge Mine in a shaft which opened up into a large underground stope. Backfilling the shaft and stope was not feasible due to the quantity of backfill which would have been required and the limited amount of backfill available in the vicinity of the shaft. Landowners whose hazardous openings were closed with semi-permanent, locking closures were provided with keys to all locks installed on their property. A key receipt form was sent to each claimant to sign and return. Receipts have not been received from all claimants as of this report date. Additional key receipt forms will be forwarded to DSL for inclusion in project files. Table 4-1 presents the status of the key receipts and the signed forms are included as Appendix C.

TABLE 4-1

**KEY RECEIPT ACKNOWLEDGEMENT STATUS
JUDITH MOUNTAIN RECLAMATION PROJECT**

SITE NAME	PA NO.	CLOSURE	LANDOWNER	KEY RECEIPTS
War Eagle	14-003-2 14-003-3 14-003-4 14-003-5 14-003-6	Culvert Culvert Culvert Culvert Culvert	Gene Fopp	Yes
Western Mines #2	14-029-1	Culvert	Canyon Resources	No
Western Mines #4	14-030-2 14-030-4	Culvert Culvert	Canyon Resources	No
Western Mines #4	14-031-1	Culvert	Canyon Resources	No
New Year	14-032-4	Culvert	Canyon Resources	No
Devils Canyon	14-038-1	Culvert	Canyon Resources	No
Virgin Gulch #1	14-075-1	Culvert	Edgar Silvernell	Yes
Virgin Gulch #2	14-093-1 14-093-2	Adit Gate Culvert	Edgar Silvernell	Yes

4.2 CONTRACTOR'S OPERATION

The project was performed utilizing a crew of two men. Rod DeBuff was the field superintendent during the project and George Walter served as a laborer during the construction project. The following list of equipment was used by DeBuff Drilling Company, Inc. to complete the Judith Mountain Reclamation Project:

- ♦ 790 John Deer Excavator
- ♦ 215 Caterpillar Excavator
- ♦ WA450-2 Komatsu Loader
- ♦ 416 Caterpillar Backhoe
- ♦ Track Drill w/ Compressor
- ♦ 1/2 Ton Four Wheel Pickup Truck
- ♦ 2 1/2 Ton Flat Bed Truck
- ♦ Four Wheel Drive All Terrain Vehicle

4.3 CHANGE ORDERS

Two change orders were issued during Judith Mountain Reclamation Project for a net change in contract price of (-) \$2,854.00 or 3.1% of the original contract total. Appendix D contains copies of the Change Orders issued for the project.

During the course of construction ten changes to the original contract were required. Adit culverts were changed to adit closures at East Fork #4 (068-1), East Fork #5 (067-1 and 2), and Western Mines #3 (030-4). Adit seals were changed to adit closures at Western Mines #1 (023-1) and New Year Gulch East #3 (099-2). Other changes included deleting the Ruby Gulch site (041-1), changing a shaft seal to installing a sign at the Upper Ox Frame site (076-1), adding a shaft closure to the New Year Subsidence site (034-7) and adding a maintenance site at the Old Batch/Pesos where subsidence had caused failure of an adit seal.

5.0 PROJECT COSTS

5.1 PAYMENT REQUESTS

The total contract amount of the Judith Mountain Reclamation Project was \$88,576.00 compared to the engineers' estimate of \$ 101,540.00. The primary differences between the original bid price and the contract total were the changes in the closure methods at several sites. Sites which were changed are included on Change Order #1 and contained in Appendix D. Table 5-1 presents a summary of the approved payment requests issued for the project. Appendix E contains copies of these documents, the Certificate of Substantial Completion, and the Affidavit on Behalf of Contractor.

TABLE 5-1
PAYMENT REQUEST SUMMARY
JUDITH MOUNTAIN RECLAMATION PROJECT

PAYMENT REQUEST	AMOUNT	DATE
No. 1	\$11,454.38	01-20-93
No. 2 (Final)	\$77,121.62	07-23-93
Total Contract Amount	\$88,576.00	

5.2 COST PER MINE OPENING

The total cost of reclamation associated with the Judith Mountain Reclamation project is \$88,576.00. Table 5-2 contains a summary of project quantities and details the costs for each mine opening involved in the Judith Mountain Reclamation Project. The average construction closure cost per mine opening is \$1,384.00. The average actual closure cost per mine opening, shown in Table 5-3, including engineering fees is \$2,296.80



TABLE 5-2

**PROJECT QUANTITIES AND COSTS
JUDITH MOUNTAIN RECLAMATION PROJECT**

ITEM	QUANTITIES	COSTS
Steel Grate Systems	1	3,000.00
Adit Culverts	200	28,000.00
Adit Gates	1	1,200.00
Shaft & Adit Seals	14	7,000.00
Shaft & Adit Closures	4,526	22,630.00
Farm Fence	200	600.00
Signs	15	1,500.00
Concrete Plug	1	12,000.00
Equipment Use	6	450.00
Debris Cleanup	Lump Sum	5,000.00
Seed, Fertilize & Mulch	Lump Sum	1,000.00
Mobilization, Bonding & Ins.	Lump Sum	5,000.00
Materials	Lump Sum	1,196.00

Notes: Quantities are cubic yards for closures, linear feet for fence, hours for equipment use, and single units for all other categories.

5.3 PROFESSIONAL SERVICE FEES

Services provided by Chen-Northern, Inc. included landowner consent, budget preparation, grant application, weed board approval, engineering design, construction contract administration, quantity accounting, and full-time on-site inspection. A cost breakdown for each service provided by Chen-Northern to complete the project, the total construction cost, and a cost analysis is contained in Table 5-3.

THE UNIVERSITY OF CHICAGO

NAME	ADDRESS	CITY	STATE	ZIP
ALAN T. BROWN	1234 N. LAKEVIEW	CHICAGO	ILL.	60610
JOHN D. SMITH	5678 S. MICHIGAN	CHICAGO	ILL.	60637
MARY K. JONES	9012 W. FULLER	CHICAGO	ILL.	60656
ROBERT L. GARCIA	3456 E. 53RD	CHICAGO	ILL.	60642
SARAH E. WILSON	7890 N. ELSTON	CHICAGO	ILL.	60630
DAVID M. ROY	2345 S. HALSTED	CHICAGO	ILL.	60608
JENNIFER A. HARRIS	6789 W. 95TH	CHICAGO	ILL.	60643
CHRISTOPHER B. LEE	1011 N. LAKEVIEW	CHICAGO	ILL.	60610
AMANDA K. WHITE	4567 S. MICHIGAN	CHICAGO	ILL.	60637
ANTHONY J. MARTIN	8901 W. FULLER	CHICAGO	ILL.	60656
STEPHANIE L. THOMPSON	3210 E. 53RD	CHICAGO	ILL.	60642
MICHAEL R. DAVIS	7654 N. ELSTON	CHICAGO	ILL.	60630
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OLIVIA T. YOUNG	1987 N. LAKEVIEW	CHICAGO	ILL.	60610
NOAH P. KING	5432 S. MICHIGAN	CHICAGO	ILL.	60637
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LEONARD H. NELSON	5432 S. MICHIGAN	CH		

TABLE 5-3

**ANALYSIS OF PROFESSIONAL SERVICE FEES
JUDITH MOUNTAIN RECLAMATION PROJECT**

ENGINEERING

Site Discovery, Ownership Determination, and Inventory	\$ 29,627.93
Grant Narrative and Environmental Assessment Preparation	\$ 1,802.26
Closure Design, Bid Package Preparation, and Bid Administration	\$ 16,420.62
Construction Inspection, Administration, and Final Report Preparation	\$ 31,622.66
TOTAL ENGINEERING FEE	\$ 79,473.47
TOTAL CONSTRUCTION COST	\$ 88,576.00
TOTAL PROJECT COST	\$ 168,049.47
Total Engineering Fee/Total Project Cost	47.3%
Total Construction Cost/Total Project Cost	52.7%
Construction Inspection Cost/Total Construction Cost	35.7%
Engineering Design and Bid Package Preparation/Total Construction Cost	18.5%
Total Number of Mine Openings Inventoried	113
Total Number of Mine Openings Closed	64
ACTUAL CLOSURE COST PER MINE OPENING¹	\$ 2,296.80

- 1 Actual closure costs include both engineering and construction expenses. Engineering expenses were adjusted to reflect only those costs incurred for the 64 mine openings include in the construction project. This adjustment was made because 44% of those sites originally inventoried were dropped due to non-consent for closure by land or mineral owners. Project costs included in this adjustment are Site Discovery and Ownership Determination, Grant Narrative and EA Preparation, and Closure Design and Bid Package Preparation. These cost categories were multiplied by 0.56 to derive the actual cost figure.

THE HISTORY OF THE

REIGN OF

CHARLES THE FIRST

BY

JOHN BURNET

OF

SCOTLAND

IN

SEVEN VOLUMES

THE SECOND

AND LAST

VOLUME

OF

THE

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OF

CHARLES THE FIRST

BY

6.0 PROJECT SUMMARY

6.1 PROJECT RECONCILIATION

Table 6-1 summarizes the differences between the reclamation closures specified in the contract bid document and those actually constructed. Appendix F contains a reconciliation of the work specified in the contract documents compared to what was actually constructed at each site.

TABLE 6-1

**RECLAMATION CLOSURES SPECIFIED VS. CONSTRUCTED
JUDITH MOUNTAIN RECLAMATION PROJECT**

CLOSURE	QUANTITY SPECIFIED	QUANTITY CONSTRUCTED
Steel Grate Systems	1	1
Adit Culverts	20	16
Adit Gates	1	1
Shaft & Adit Seals	18	14
Shaft & Adit Closures	3,645	4,526
Farm Fence	200	200
Signs	14	15
Concrete Plug	1	1
Equipment Use	9	6

Notes: Quantities are cubic yards for closures, linear feet for fence, hours for equipment use, and single units for all other categories.

6.2 SITE CONDITIONS AFTER COMPLETION

Dan Koszuta, AMRB Project Manager, and Jesse Whitford, Chen-Northern's project inspector visited several of the sites for acceptance just prior to final project completion.

A representative sampling of each reclamation method was selected and several sites were inspected by Dan Koszuta and Jesse Whitford. The closures completed during the Judith Mountain Reclamation Project were completed in general accordance to specifications contained in the Standard Construction Specifications for Abandoned Mine Reclamation and the bid document for the Judith Mountain Reclamation Project, issued on June 21, 1992. Final Inspection was completed by the AMRB on June 17, 1993.

6.3 MONITORING AND MAINTENANCE

Periodic monitoring for subsidence of sites backfilled during the project should be conducted to verify adequacy of the fill. Landowners were offered a "permanent" closure by selecting the backfill option. To minimize any liability to the State, all backfilled mine openings should be inspected on an annual basis for several years following completion of the project. The semi-permanent closures (culverts, steel grates and the adit gate) installed during the project may protect against unauthorized entry for a limited time. However, vandalism and damage due to natural causes has been, and will continue to be, a problem with these types of closures. To reduce the public safety hazard associated with damaged closures, a monitoring program should be initiated to inspect all bulkheads and fences periodically. Any human or naturally caused damage should be reported to landowners for subsequent repair. It should be noted that maintenance of steel grates, adit gates and doors, hatches, locks, and bulkheads are the responsibility of individual claimants and or landowners.

Revegetation success should be monitored for several years. Vegetation inspections should identify seeding failures on reclaimed sites and document species which are better suited to revegetate reclaimed sites. The presence or absence of weeds should also be documented to satisfy weed control obligations.

7.0 COMMENTS

This project included two unique closures. One of these closures was completed at an abandoned mine site near the Gilt Edge Mine (Appendix A, Map 2). A shaft collar, 50 by 50 feet in size at the surface, opened into a shaft 10 feet in diameter at a depth of 40 feet. The shaft opening was located at the top of an underground stope with its floor at a depth of 60 feet below the base of the shaft. This shaft was semi-permanently closed using a 14-foot diameter steel-fabricated jacket. The jacket was lowered into the shaft from the surface and then anchored in place using a small quantity of backfill. After backfilling around the top of the steel jacket with soil and rock materials, the steel jacket was filled concrete to complete the closure. The concrete cone proved to be an effective method of semi-permanent closure for shafts where there is insufficient backfill materials in the vicinity of an opening that could be used for closure.

The other unique closure was completed at the Upper New Year site (14-095; Appendix A, Map 3). Access to the site was limited to foot access only. Because it was not possible to transport a grate to the site by foot, the Department of State Lands helicopter was used to transport the grate by air to the mine site. The grate was then placed over the shaft opening and secured to complete the closure. Utilization of a helicopter to transport grate sections to a mine site proved to be effective when access to the site with equipment is not possible.

Table 7-1 lists the mine openings inventoried for the Judith Mountain Reclamation Project but were not included because of landowner or claimant objection to obstructing entry to their mine openings. Most of these mine openings are located on unpatented claims in the northeast region of the Judith Mountains. As a result, there are many hazardous mine openings remaining in the Judith Mountains which do not have any obstruction or barrier to prevent unauthorized access.

The first part of the report deals with the general situation of the country. It is found that the country is in a state of general prosperity. The population is increasing, and the commerce is flourishing. The government is well administered, and the laws are strictly enforced. The people are happy and contented. The country is well governed, and the people are well treated. The government is well administered, and the laws are strictly enforced. The people are happy and contented. The country is well governed, and the people are well treated.

The second part of the report deals with the state of the country. It is found that the country is in a state of general prosperity. The population is increasing, and the commerce is flourishing. The government is well administered, and the laws are strictly enforced. The people are happy and contented. The country is well governed, and the people are well treated.

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TABLE 7-1

**JUDITH MOUNTAIN RECLAMATION PROJECT
DELETED SITES**

PA NO.	COUNTY	MINING DISTRICT	SITE NAME	LEGAL DESCRIPTION
14-010	Fergus	Warm Springs	Tail Holt	T17N R20E S30 SE NE
14-017	Fergus	Warm Springs	Cumberland	T16N R20E S05 NE NE
14-019	Fergus	Warm Springs	Matthews	T16N R20E S05 NE
14-022	Fergus	Warm Springs	Maginnis	T16N R20E S06 SE
14-025	Fergus	Warm Springs	Justice	T16N R20E S09 NE SE
14-036	Fergus	Warm Springs	New Year East #1	T16N R19E S15 SW NW
14-037	Fergus	Warm Springs	New Year East #2	T16N R19E S15 SW NW
14-039	Fergus	Warm Springs	Devils Canyon #2	T16N R19E S02 SW SW
14-040	Fergus	Warm Springs	Pyramid Creek	T16N R19E S23 SW SW
14-042	Fergus	Warm Springs	Limekiln Canyon	T16N R19E S20 NW SW
14-044	Fergus	Warm Springs	E Fk Armell Creek #1	T17N R20E S15 NW SW
14-047	Fergus	Warm Springs	East Fork Creek #1	T17N R20E S22 NW NW
14-048	Fergus	Warm Springs	East Fork Creek #2	T17N R20E S22 SW NW
14-049	Fergus	Warm Springs	East Fork Creek #3	T17N R20E S22 SW NW
14-050	Fergus	Warm Springs	Elk Peak #1	T17N R20E S22 SW NE
14-051	Fergus	Warm Springs	Elk Peak #2	T17N R20E S22 SW NE
14-052	Fergus	Warm Springs	Elk Peak #3	T17N R20E S22 SW NE
14-053	Fergus	Warm Springs	Elk Peak #4	T17N R20E S22 NW NE
14-054	Fergus	Warm Springs	Elk Peak #5	T17N R20E S22 NW NE
14-055	Fergus	Warm Springs	Elk Peak #6	T17N R20E S22 NW NE
14-056	Fergus	Warm Springs	Elk Peak #7	T17N R20E S22 SE NE
14-057	Fergus	Warm Springs	Old Glory	T17N R20E S14 NE SW
14-058	Fergus	Warm Springs	Lower Old Glory	T17N R20E S14 SE NW
14-059	Fergus	Warm Springs	Ross Pass #1	T17N R21E S08 SE SW
14-060	Fergus	Warm Springs	Ross Pass #2	T17N R21E S17 SE NW
14-061	Fergus	Warm Springs	Ross Pass #3	T17N R21E S17 SE NW
14-062	Fergus	Warm Springs	Two Lady #16	T17N R21E S17 SE NW
14-063	Fergus	Warm Springs	Two Lady #4	T17N R21E S17 NE SW
14-064	Fergus	Warm Springs	Two Lady #5	T17N R21E S17 NE SW
14-065	Fergus	Warm Springs	Brickyard Creek	T17N R21E S17 SW SW
14-069	Fergus	Warm Springs	East Fork #6	T17N R20E S22 NE NW
14-070	Fergus	Warm Springs	Verde	T17N R20E S19 SW NW
14-072	Fergus	Warm Springs	Miranda	T16N R20E S05 SE SW
14-073	Fergus	Warm Springs	Upper Old Nelson	T16N R20E S05 SW SE
14-074	Fergus	Warm Springs	Lower Old Nelson	T16N R20E S05 SW SE
14-077	Fergus	Warm Springs	Lower Ox Frame Gulch	T16N R20E S18 SW SE
14-078	Fergus	Warm Springs	Pekay Peak #1	T16N R20E S17 NW NW
14-079	Fergus	Warm Springs	Pekay Peak #2	T16N R20E S17 NE NW
14-094	Fergus	Warm Springs	East Fork Armell Creek #3	T17N R20E S21 NE NE
14-097	Fergus	Warm Springs	Virgin Gulch #3	T16N R20E S18 NE NE

THE HISTORY OF THE UNITED STATES

Year	Event	Location	Significance
1776	Declaration of Independence	Philadelphia	Established the United States as an independent nation.
1787	Constitution signed	Philadelphia	Established the framework for the federal government.
1791	Bill of Rights adopted	Philadelphia	Guaranteed the first ten amendments to the Constitution.
1800	Move to Washington, D.C.	Washington, D.C.	Established the new capital of the United States.
1820	Missouri Compromise	St. Louis	Resolved the issue of slavery in the territories.
1845	Texas Annexation	Washington, D.C.	Expanded the territory of the United States.
1861	Start of the Civil War	Fort Sumter	Marked the beginning of the conflict between the North and South.
1865	End of the Civil War	Appomattox	Resulted in the preservation of the Union.
1877	Compromise of 1877	Washington, D.C.	Resolved the disputed 1876 presidential election.
1890	Wounded Knee Massacre	South Dakota	Marked the end of the Indian Wars.
1898	Spanish-American War	San Juan	Established the United States as a world power.
1901	McKinley's Assassination	San Francisco	Resulted in the presidency of Theodore Roosevelt.
1913	Progressive Era begins	Washington, D.C.	Marked the start of a period of social and political reform.
1917	U.S. enters WWI	Washington, D.C.	Marked the United States' entry into the First World War.
1918	1918 Flu Pandemic	Various locations	One of the deadliest pandemics in history.
1929	Stock Market Crash	Wall Street	Marked the beginning of the Great Depression.
1933	New Deal implemented	Washington, D.C.	Marked the start of Franklin D. Roosevelt's policies.
1941	Attack on Pearl Harbor	Hawaii	Resulted in U.S. entry into WWII.
1945	End of WWII	Yokohama	Marked the end of the Second World War.
1947	Truman Doctrine	Washington, D.C.	Marked the start of the Cold War.
1950	Korean War begins	Seoul	Marked the start of the Korean conflict.
1954	Brown v. Board of Education	Topeka	Ended racial segregation in schools.
1957	First satellite state	Berlin	Marked the start of the Space Race.
1961	Cuban Missile Crisis	Washington, D.C.	Marked a major confrontation between the U.S. and the Soviet Union.
1963	John F. Kennedy's Assassination	Dallas	Resulted in the presidency of Lyndon B. Johnson.
1964	Civil Rights Act	Washington, D.C.	Marked a major step in the Civil Rights Movement.
1968	Vietnam War escalates	South Vietnam	Marked the start of the Vietnam conflict.
1971	China Normalization	Washington, D.C.	Marked the start of U.S. relations with China.
1973	Watergate Scandal	Washington, D.C.	Marked the end of Richard Nixon's presidency.
1975	Paris Peace Accords	Paris	Marked the end of the Vietnam War.
1979	Iran Hostage Crisis	Washington, D.C.	Marked a major confrontation between the U.S. and Iran.
1981	AIDS first reported	New York	Marked the start of the AIDS epidemic.
1982	Reagan's Second Term	Washington, D.C.	Marked the start of Ronald Reagan's second presidency.
1984	Los Angeles Olympics	Los Angeles	Marked the start of the 1984 Summer Olympics.
1987	Reagan's First Term	Washington, D.C.	Marked the start of Ronald Reagan's first presidency.
1989	End of the Cold War	Washington, D.C.	Marked the end of the Cold War.
1991	Gulf War	Kuwait	Marked the start of the Persian Gulf conflict.
1993	Clinton's First Term	Washington, D.C.	Marked the start of Bill Clinton's first presidency.
1994	NATO Expansion	Washington, D.C.	Marked the start of NATO's expansion.
1997	Clinton's Second Term	Washington, D.C.	Marked the start of Bill Clinton's second presidency.
1998	Clinton Impeachment	Washington, D.C.	Marked the start of the Clinton impeachment process.
1999	Clinton's Third Term	Washington, D.C.	Marked the start of Bill Clinton's third presidency.
2001	9/11 Attacks	New York	Marked the start of the War on Terror.
2002	Afghanistan War	Afghanistan	Marked the start of the War in Afghanistan.
2003	Iraq War	Iraq	Marked the start of the War in Iraq.
2004	Reagan's Third Term	Washington, D.C.	Marked the start of Ronald Reagan's third presidency.
2005	Katrina	New Orleans	Marked the start of the Gulf of Mexico oil spill.
2006	Obama's First Term	Washington, D.C.	Marked the start of Barack Obama's first presidency.
2007	Financial Crisis	Washington, D.C.	Marked the start of the 2007-2008 financial crisis.
2008	Obama's Second Term	Washington, D.C.	Marked the start of Barack Obama's second presidency.
2009	Obama's First Term	Washington, D.C.	Marked the start of Barack Obama's first presidency.
2010	Obama's Second Term	Washington, D.C.	Marked the start of Barack Obama's second presidency.
2011	Obama's Third Term	Washington, D.C.	Marked the start of Barack Obama's third presidency.
2012	Obama's Fourth Term	Washington, D.C.	Marked the start of Barack Obama's fourth presidency.
2013	Obama's Fifth Term	Washington, D.C.	Marked the start of Barack Obama's fifth presidency.
2014	Obama's Sixth Term	Washington, D.C.	Marked the start of Barack Obama's sixth presidency.
2015	Obama's Seventh Term	Washington, D.C.	Marked the start of Barack Obama's seventh presidency.
2016	Obama's Eighth Term	Washington, D.C.	Marked the start of Barack Obama's eighth presidency.
2017	Trump's First Term	Washington, D.C.	Marked the start of Donald Trump's first presidency.
2018	Trump's Second Term	Washington, D.C.	Marked the start of Donald Trump's second presidency.
2019	Trump's Third Term	Washington, D.C.	Marked the start of Donald Trump's third presidency.
2020	Trump's Fourth Term	Washington, D.C.	Marked the start of Donald Trump's fourth presidency.
2021	Trump's Fifth Term	Washington, D.C.	Marked the start of Donald Trump's fifth presidency.
2022	Trump's Sixth Term	Washington, D.C.	Marked the start of Donald Trump's sixth presidency.
2023	Trump's Seventh Term	Washington, D.C.	Marked the start of Donald Trump's seventh presidency.
2024	Trump's Eighth Term	Washington, D.C.	Marked the start of Donald Trump's eighth presidency.

8.0 PHOTOGRAPHIC RECORD

Print and slide photographs were taken of all hazardous mine openings before and after construction activities were completed. The photographic record also contains prints and slide photographs of most HMO's taken during closure activities. This photographic record is contained in Appendix G.



APPENDIX A

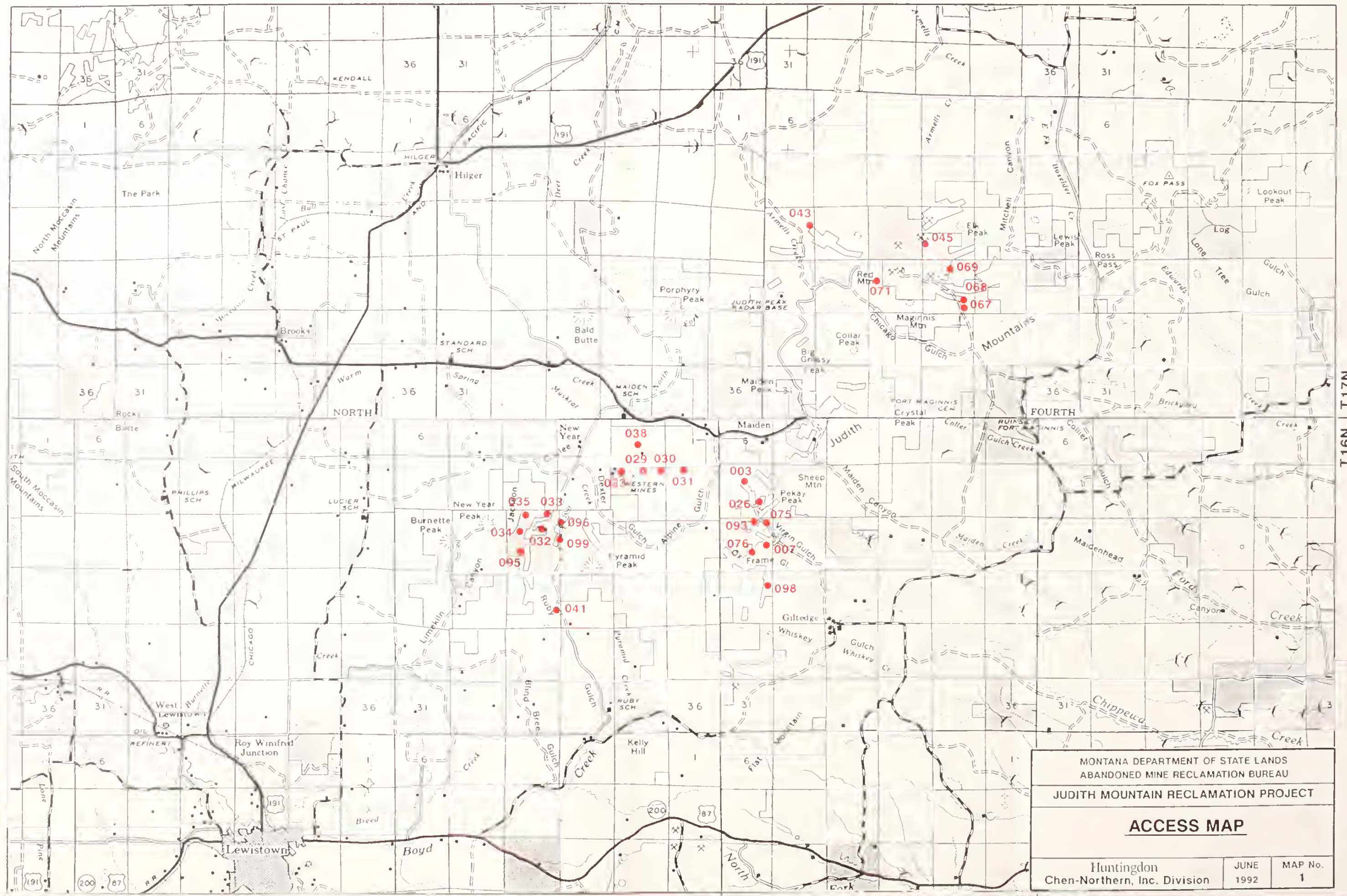
**VICINITY AND HAZARD MAPS
JUDITH MOUNTAIN RECLAMATION PROJECT**

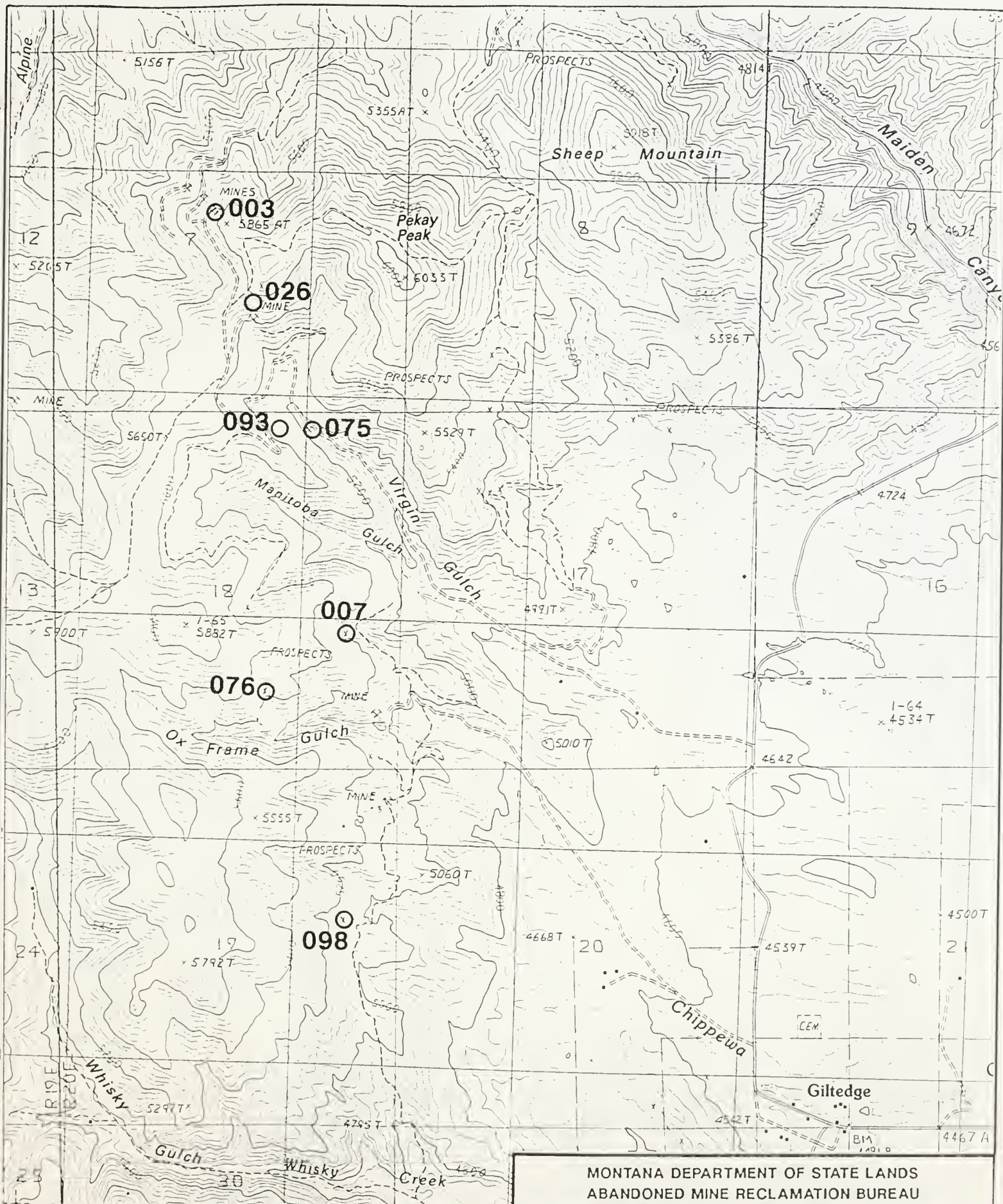
TABLE A-1
ACCESS MAP CROSS REFERENCE TABLE

MAP NO.	SITE	P.A. NO.
1	Access Map	Includes All
2	War Eagle	14-003
2,10	Gilt Edge	14-007
7	Western Mines #4	14-023
2	Black Bull	14-026
7	Western Mines #2	14-029
7	Western Mines #4	14-020
7	Western Mines #4	14-031
3,4,5	New Year	14-032
3,4,5	Lower New Year	14-033
3,4,5	New Year Subsidence	14-034
3,4	New Year Gulch	14-035
7	Devils Canyon #1	14-038
8	Armell Ck #1	14-043
8	E Fk Armell Ck #2	14-045
6	East Fork #5	14-067
8	East Fork #4	14-068
6	East Fork #6	14-069
8	Red Mountain	14-071
2	Virgin Gulch #1	14-075
2	Upper Ox Frame Gulch	14-076
2	Virgin Gulch #2	14-093
3	Upper New Year	14-095
3	Crystal Cave	14-096
2	Moonlight	14-098
3	New Year Gulch #2	14-099

THE UNIVERSITY OF CHICAGO
DEPARTMENT OF CHEMISTRY

NAME	DATE	SCORE
1. Name of the compound		
2. Molecular formula		
3. Structural formula		
4. IUPAC name		
5. Common name		
6. Physical properties		
7. Chemical properties		
8. Synthesis		
9. Uses		
10. Safety		
11. Environmental impact		
12. References		
13. Comments		
14. Signature		
15. Date		





MONTANA DEPARTMENT OF STATE LANDS
ABANDONED MINE RECLAMATION BUREAU

JUDITH MOUNTAIN RECLAMATION PROJECT

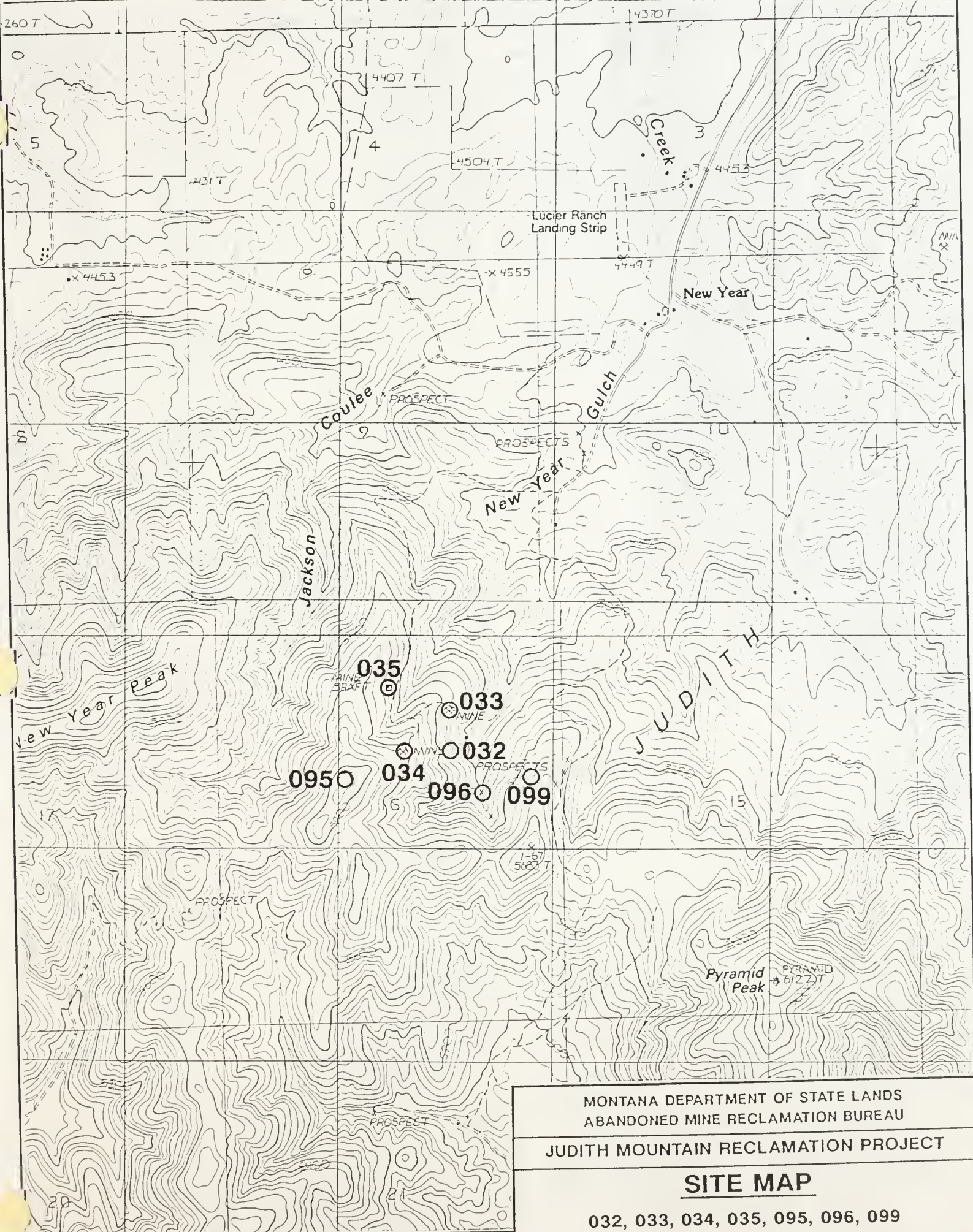
SITE MAP

003, 007, 026, 075, 076, 007, 093, 098

Huntingdon
Chen-Northern, Inc. Division

JUNE
1992

MAP No.
2



MONTANA DEPARTMENT OF STATE LANDS
ABANDONED MINE RECLAMATION BUREAU

JUDITH MOUNTAIN RECLAMATION PROJECT

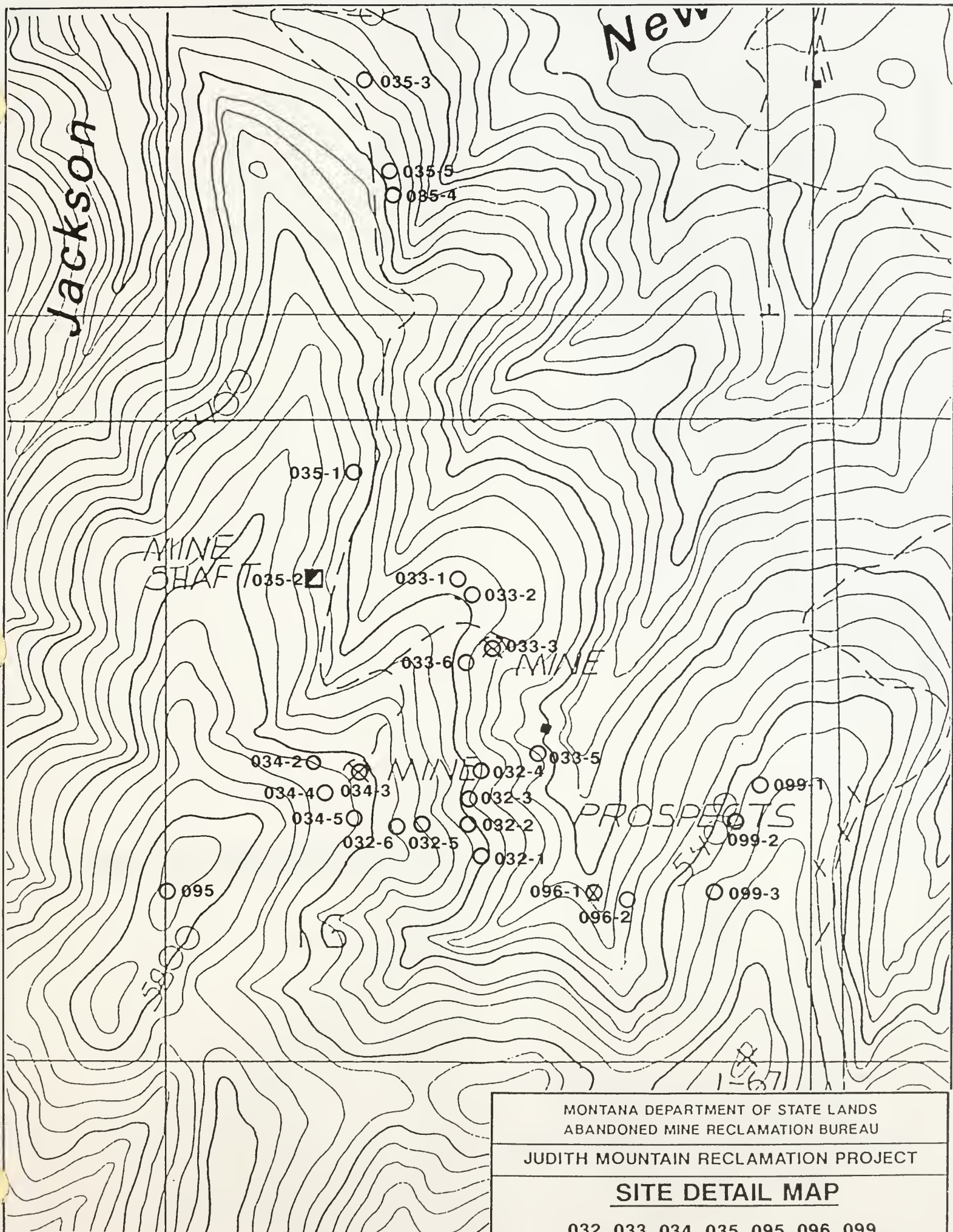
SITE MAP

032, 033, 034, 035, 095, 096, 099

Huntingdon
Chen-Northern, Inc. Division

JUNE
1992

MAP No.
3



638

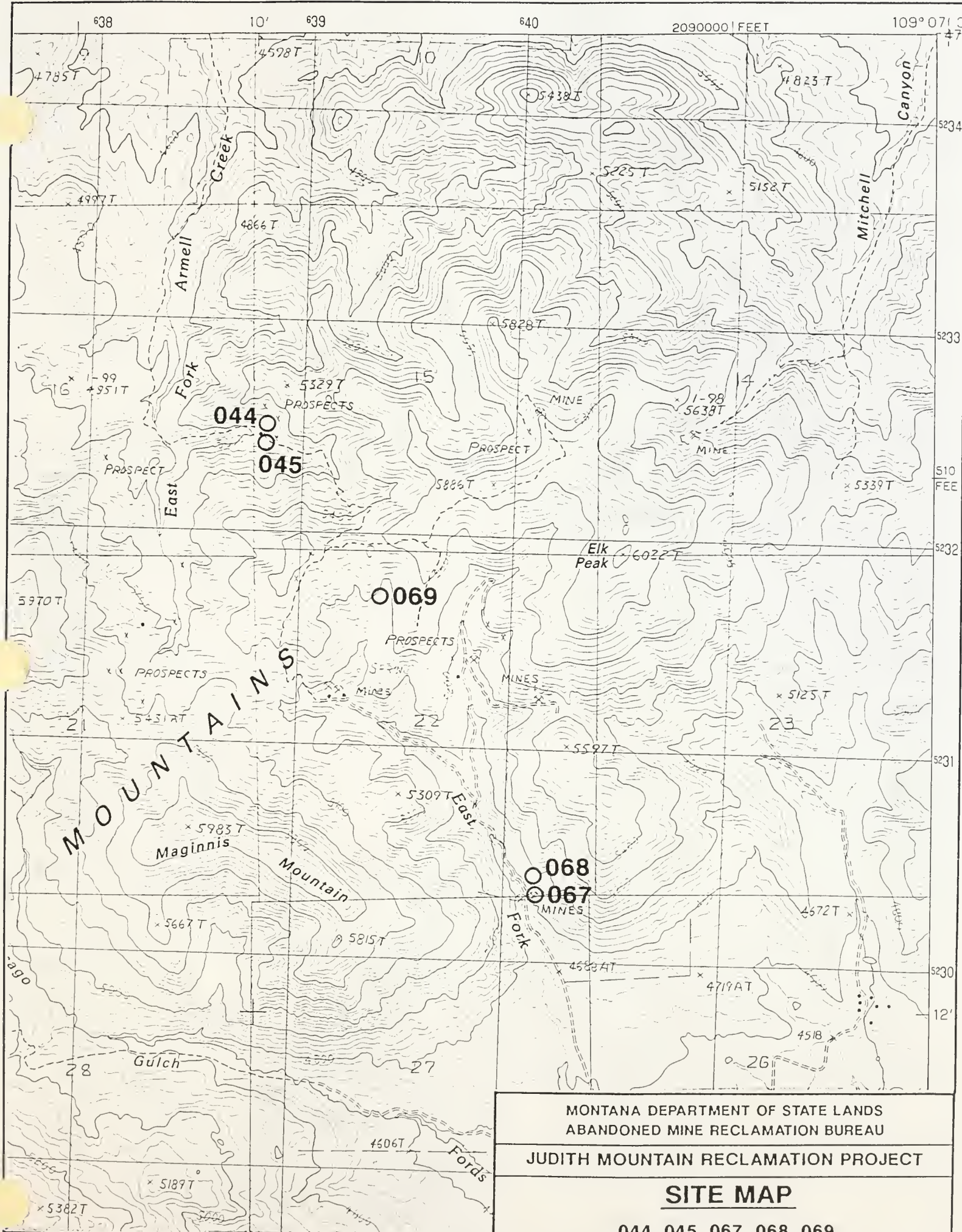
10'

639

640

2090000 FEET

109° 07' 12"



MONTANA DEPARTMENT OF STATE LANDS
ABANDONED MINE RECLAMATION BUREAU

JUDITH MOUNTAIN RECLAMATION PROJECT

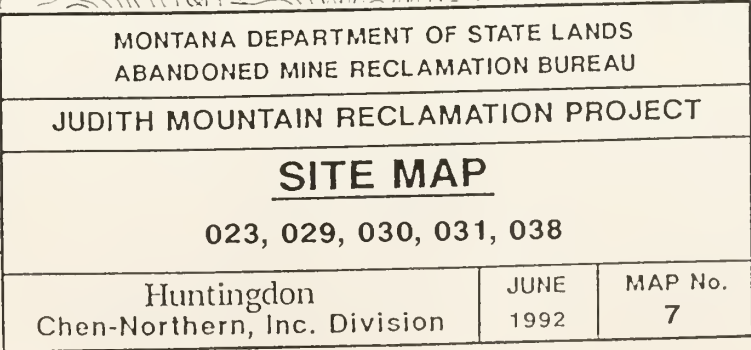
SITE MAP

044, 045, 067, 068, 069

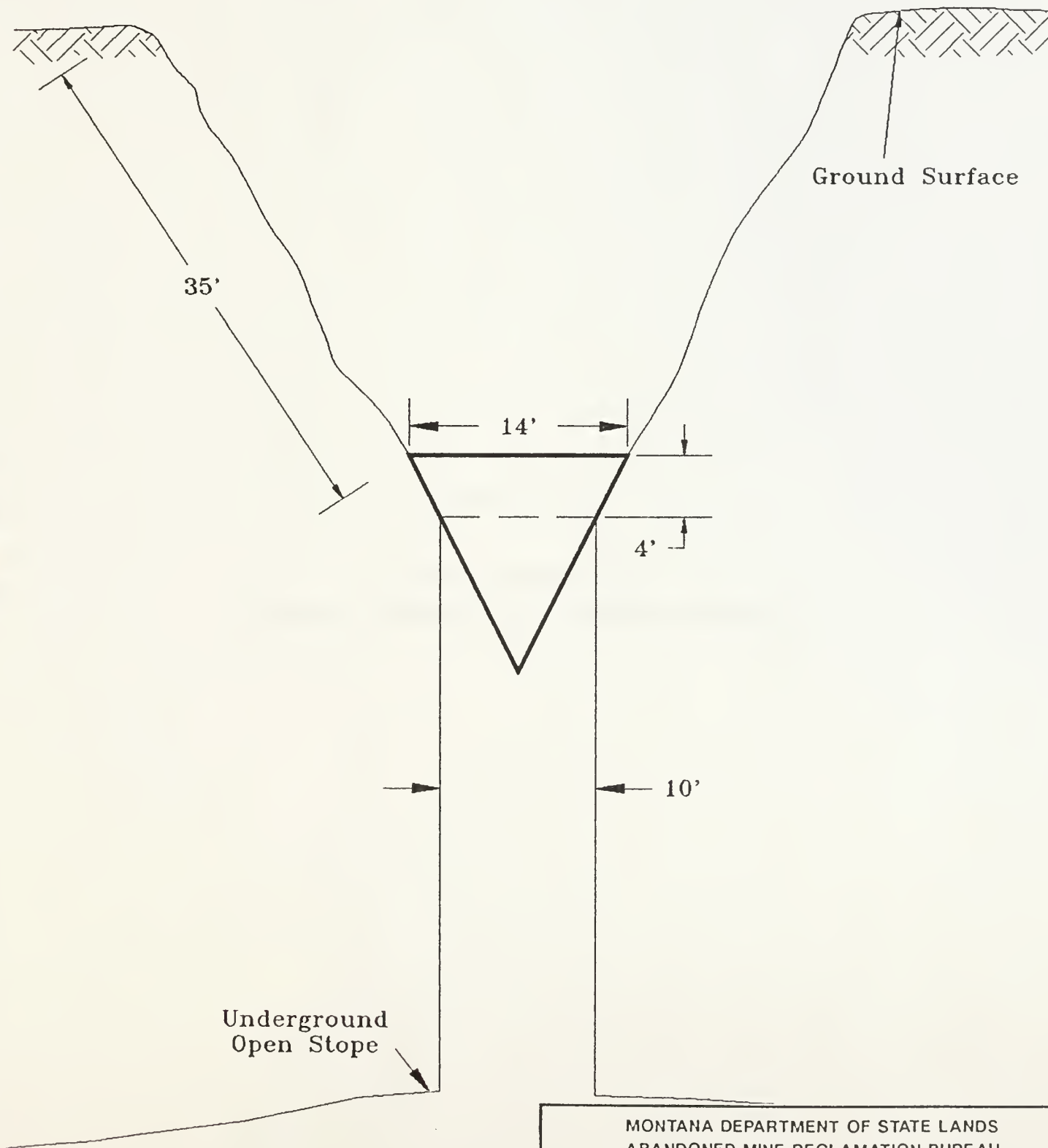
Huntingdon
Chen-Northern, Inc. Division

JUNE
1992

MAP No.
6



GILT EDGE STOPE



MONTANA DEPARTMENT OF STATE LANDS
ABANDONED MINE RECLAMATION BUREAU

JUDITH MOUNTAIN RECLAMATION PROJECT

SITE DETAIL MAP

007-3

Huntingdon
Chen-Northern, Inc. Division

JUNE
1992

MAP No.
10

APPENDIX B

BID TABULATIONS

JUDITH MOUNTAIN RECLAMATION PROJECT

JUDITH MOUNTAIN RECLAMATION PROJECT
FERGUS COUNTY, MONTANA

DSL-AMRB No. 92-006
July 30, 1992

BID TABULATIONS				ENGINEER'S ESTIMATE		DeBuff Drilling Co. Inc.		Mainline Construction Inc.		Konitz Contracting, Inc.	
Item Number	Estimated Quantity	Unit	Description	Unit Price	Total Price						
1.	1	LS	Mobilization, Bonding and Insurance	5,000.00	5,000.00	5,000.00	5,000.00	5,000.00	5,000.00	5,000.00	5,000.00
2.	1	LS	Debris Cleanup	520.00	520.00	5,000.00	5,000.00	10,000.00	10,000.00	20,000.00	20,000.00
3.	3,645	CY	Adit and Shaft Closure - Backfill Closure	5.15	18,775.00	5.00	18,225.00	14.95	54,492.75	10.27	37,434.15
4.	18	EA	Adit and Shaft Seal - Blast or Hand Seal	587.50	10,575.00	500.00	9,000.00	650.00	11,700.00	2,800.00	50,400.00
5.	20	EA	Adit Culvert	1,735.00	34,700.00	1,750.00	35,000.00	1,700.00	34,000.00	2,500.00	50,000.00
6.	1	EA	Adit Door	1,600.00	1,600.00	1,200.00	1,200.00	1,550.00	1,550.00	1,000.00	1,000.00
7.	1	EA	Steel Grate Shaft Systems - Specialty Grate	3,600.00	3,600.00	3,000.00	3,000.00	3,625.00	3,625.00	2,000.00	2,000.00
8.	1	LS	Concrete Cone Shaft Closure	21,850.00	21,850.00	12,000.00	12,000.00	11,940.00	11,940.00	10,000.00	10,000.00
9.	14	EA	Install Owner Provided Signs	30.00	420.00	100.00	1,400.00	70.00	980.00	95.00	1,330.00
10.	1	LS	Fertilizing, Seeding and Mulching	3,500.00	3,500.00	1,000.00	1,000.00	2,000.00	2,000.00	2,000.00	2,000.00
11.	200	LF	Farm Fence	5.00	1,000.00	3.00	600.00	3.00	600.00	1.50	300.00
TOTAL:					101,540.00		91,425.00		135,887.75		179,464.15

JUDITH MOUNTAIN RECLAMATION PROJECT
FERGUS COUNTY, MONTANA

DSL-AMRB No. 92-006
July 30, 1992

BID TABULATIONS				ENGINEER'S ESTIMATE		Baxter Const.		Shumaker Trucking and Excavating Contractors, Inc.		Montgomery Const.	
Item Number	Estimated Quantity	Unit	Description	Unit Price	Total Price						
1.	1	LS	Mobilization, Bonding and Insurance	5,000.00	5,000.00	5,000.00		5,000.00		5,000.00	5,000.00
2.	1	LS	Debris Cleanup	520.00	520.00	3,000.00		10,000.00		50.00	50.00
3.	3,645	CY	Adit and Shaft Closure - Backfill Closure	5.15	18,775.00	6.50		4.50		7.00	25,515.00
4.	18	EA	Adit and Shaft Seal - Blast or Hand Seal	587.50	10,575.00	1,495.00		1,500.00		955.55	17,199.90
5.	20	EA	Adit Culvert	1,735.00	34,700.00	1,450.00		2,000.00		2,090.00	41,800.00
6.	1	EA	Adit Door	1,600.00	1,600.00	1,200.00		3,000.00		3,000.00	3,000.00
7.	1	EA	Steel Grate Shaft Systems - Specialty Grate	3,600.00	3,600.00	3,000.00		3,000.00		4,200.00	4,200.00
8.	1	LS	Concrete Cone Shaft Closure	21,850.00	21,850.00	15,000.00		24,000.00		16,343.00	16,343.00
9.	14	EA	Install Owner Provided Signs	30.00	420.00	85.00		30.00		100.00	1,400.00
10.	1	LS	Fertilizing, Seeding and Mulching	3,500.00	3,500.00	4,500.00		12,750.00		3,000.00	3,000.00
11.	200	LF	Farm Fence	5.00	1,000.00	2.00		6.00		5.00	1,000.00
					101,540.00			142,772.50			118,507.90

APPENDIX C

KEY RECEIPT ACKNOWLEDGEMENTS JUDITH MOUNTAIN RECLAMATION PROJECT

I hereby acknowledge receipt of keys to the locks on the bulkheads installed at the following abandoned mine project sites in the Warm Springs Mining District, Fergus County, Montana:

- ♦ Western Mines #2 (14-029), Mine Opening #1
T16N, R19E, Section 11, NW1/4, NE1/4
- ♦ Western Mines #3 (14-030), Mine Openings #2 and #4
T16N, R19E, Section 11, NW1/4, NE1/4
- ♦ Western Mines #4 (14-031), Mine Opening #1
T16N, R19E, Section 11, NW1/4, NE1/4
- ♦ New Year (14-032), Mine Opening #4
T16N, R19E, Section 16, SW1/4, NE1/4
- ♦ Devils Canyon #1 (14-038), Mine Opening #1
T16N, R19E, Section 02, SW1/4, SW1/4

These protective measures were installed by the Montana Department of State Lands, Abandoned Mine Reclamation Bureau, at the landowner's request, so that future access to the underground workings would be possible.

The Department of State Lands and its contractors make no warranties, either expressed or implied, concerning the safety or useability of the underground mine workings of the sites mentioned above. The undersigned understands that entry into the underground mine workings without provision for proper air is the responsibility of the undersigned.

I certify that I have read, understand, and concur with the statements made on this page.

Pete Runsoo, Chief Geologist, CR Kendall 7/8/93
Name Date

Eugene Coffey 7-8-93
Witness Date

one key

Hack

I hereby acknowledge receipt of keys to the locks on the ~~three gates~~ installed at the following abandoned mine project site in the Austin Mining District, Lewis & Clark County, Montana:

- ♦ War Eagle (25-028), Mine Opening #1
T10N, R5W, Section 10, NE1/4

These protective measures were installed by the Montana Department of State Lands, Abandoned Mine Reclamation Bureau, at the landowner's request, so that future access to the underground workings would be possible.

The Department of State Lands and its contractors make no warranties, either expressed or implied, concerning the safety or useability of the underground mine workings of the sites mentioned above. The undersigned understands that entry into the underground mine workings without provision for proper air is the responsibility of the undersigned.

I certify that I have read, understand, and concur with the statements made on this page.

Thanks

Kurt Vandewalk
Name
one key

6-4-93

Date

Witness

Date

APPENDIX D

CHANGE ORDERS

JUDITH MOUNTAIN RECLAMATION PROJECT

ORDER NO. 1

PROJECT TITLE: Judith Mountain Reclamation Project

MONT A/E or DSL-AMRB: 92-006

CONTRACT DATE: September 28, 1992

OWNER: Montana Department of State Lands - Abandoned Mine Reclamation Bureau

CONTRACTOR: DeBuff Drilling Company, Inc., Gilt Edge Route, Lewistown, MT 59457

CHLORINE BERN
HELENA, MT 59601

Change Orders must be accompanied by an itemized cost breakdown. You are hereby requested to comply with the following changes from the Contract Documents. (Show separate costs for materials, labor, equipment, and miscellaneous. Show percent where applicable.)

ITEM NO.	DESCRIPTION OF CHANGES - ESTIMATED QUANTITIES & UNITS	COST OF CHANGES					TOTAL COST
		MAT'LS.	LABOR	EQUIP.	MISC.	TOTAL UNIT COST	
1.	East Fork #4 (14-068-1) Delete: Adit Culvert (3' x 12') Add: Adit Closure 20 c.y. Culvert & Hatch	378.80				1750.00 5.00 378.80	-1750.00 100.00 378.80
2.	East Fork #5 (14-067-1) Delete: Adit Culvert (3' x 14') Add: Adit Closure 20 c.y. Culvert & Hatch	408.60				1750.00 5.00 408.60	-1750.00 100.00 408.60
3.	East Fork #5 (14-067-2) Delete: Adit Culvert (3' x 14') Add: Adit Closure 20 c.y. Culvert & Hatch	408.60				1750.00 5.00 408.60	-1750.00 100.00 408.60
4.	Western Mines #3 (14-030-4) Delete: Culvert Add: Adit Closure 75 c. y.					1750.00 5.00	-1750.00 375.00
5.	Western Mines #1 (14-023-1) Delete: Adit Seal Add: Adit Closure 75 c.y.					500.00 5.00	-500.00 375.00
6.	New Year Gulch East #3 (14-099-2) Delete: Adit Seal Add: Adit Closure 125 c. y.					500.00 5.00	-500.00 625.00
7.	Ruby Gulch (14-041-1) Delete: Adit Seal					500.00	-500.00
8.	New Year Subsidence (14-34-7) Add: Shaft Closure 610 c. y.					5.00	3050.00
9.	Old Batch/Peso - Maintenance Add: Adit Closure 25 c. y.					5.00	125.00
10.	Upper Ox Frame (14-076-1) Delete: Shaft Seal Add: Sign (1)					500.00 100.00	-500.00 100.00
TOTAL COST - MATERIALS, LABOR, EQUIPMENT & MISC.						- \$2,854.00	
OVERHEAD & PROFIT @ _____ %						Included	
GRAND TOTAL - THIS CHANGE ORDER						< \$2,854.00	

Original Contract Price	\$ 91,425.00
Current Contract Price Adjusted by Previous Change Order	N/A
Cost this Change Order (+ or -)	\$ -2,854.00
New Contract Price including this Change Order	\$ 88,571.00

The completion date as set forth in the Contract Documents shall be (unchanged, increased, decreased) by _____ calendar days.

The date for completion of all work will be June 18, 1993.

Description and Justification for Change:


1. Consent for adit closure obtained from landowner/claimant.
2. Consent for adit closure obtained from landowner/claimant.
3. Consent for adit closure obtained from landowner/claimant.
4. Consent for adit closure obtained from landowner/claimant.
5. Site accessed with equipment and closure completed.
6. Site accessed with equipment and closure completed.
7. Landowner completed adit seal.
8. Additional site identified and consent obtained from landowner and DSL/AMRB.
9. Maintenance of Phase 19 site.
10. Site unsafe to drill for blasting, unable to perform hand seal.

SURETY CONSENT

The Surety hereby consents to the aforementioned Contract Change Order and agrees that its bond or bonds shall apply and extend to the Contract as thereby modified or amended per this Change Order. The Principal and the Surety further agree that on or after execution of this consent, the penalty of the applicable Performance Bonds or Bonds is hereby increased by \$2,854.00--- (100% of the Change Order amount) and the penalty of the applicable Labor and Material Bond or Bonds is hereby increased by \$2,854.00 (100% of the Change Order amount).

COUNTERSIGNED BY MONTANA
RESIDENT AGENT
FLYNN INSURANCE AGENCY

SURETY



TRANSAAMERICA PREMIER INSURANCE COMPANY

GORDON D. MCMANUS

By: 

Seal GORDON D. MCMANUS
ATTORNEY-IN-FACT

Recommended by: Jeremiah B. Bowser
Engineer

6/28/93
Date

Accepted by: M2 DeBull
Contractor

6-19-93
Date

Approved by: Vic R Anderson
Owner

6/28/93
Date

CHANGE ORDER

ORDER NO. 2

PROJECT TITLE: Judith Mountain Reclamation Project

MONT A/E or DSL-AMRB: 92-006

CONTRACT DATE: September 28, 1992

OWNER: Montana Department of State Lands/Abandoned Mine Reclamation Bureau

CONTRACTOR: Debuff Drilling Company, Inc. Gilt Edge Route, Lewistown, MT

Change Orders must be accompanied by an itemized cost breakdown. You are hereby requested to comply with the following changes from the Contract Documents. (Show separate costs for materials, labor, equipment, and miscellaneous. Show percent where applicable.)

ITEM NO.	DESCRIPTION OF CHANGES - ESTIMATED QUANTITIES & UNITS	COST OF CHANGES					TOTAL COST
		MAT'LS.	LABOR	EQUIP.	MISC.	TOTAL UNIT COST	
	Reconciliation of Plan Quantities						
	Backfill						
1.	Original Contract Qty. \$3645 c.y. Add by change order <u>970 c.y.</u> Adj. orig. quantity \$4615 c.y.						
	Total backfill installed \$4526 c.y. Less adjusted orig. qty <u>4615 c.y.</u> -89 c.y.					5.00	-445.00
2.	Equipment use - 215 Caterpillar excavation			6.0		75.00	450.00
TOTAL COST - MATERIALS, LABOR, EQUIPMENT & MISC.							5.00
OVERHEAD & PROFIT @ _____%							Included
GRAND TOTAL - THIS CHANGE ORDER							5.00

Original Contract Price	<u>91,425.00</u>
Current Contract Price Adjusted by Previous Change Order	<u>88,571.00</u>
Cost this Change Order (+ or -)	<u>5.00</u>
New Contract Price including this Change Order	<u>88,576.00</u>

APPENDIX E

**APPROVED PAYMENT REQUESTS, CERTIFICATES OF SUBSTANTIAL
COMPLETION, AND AFFIDAVIT ON BEHALF OF CONTRACTOR
JUDITH MOUNTAIN RECLAMATION PROJECT**

PAYMENT REQUEST NO. 1

FROM 10/26/92 TO 12-31-92

PROJECT TITLE: Judith Mountain Reclamation Project

LOCATION: Fergus County, Montana MONT A/E or DSL-AMRB: 92-006

NAME OF CONTRACTOR: DeBuff Drilling Company, Inc.

ADDRESS: Gilt Edge Route, Lewistown, MT 59457

SUMMARY OF PROJECT STATUS

Amount of Original Contract

\$91,425.90

Change Order No. _____

\$ _____

Change Order No. _____

\$ _____

Change Order No. _____

\$ _____

Amount of Approved Change Order(s)

\$ 00.00

TOTAL CONTRACT AMOUNT

\$ 91,425.90

Pay Request No.	Amount of Request
1	\$11,454.38

Total Contract Amount Completed to Date

\$ 12,727.08

Less Retainage (10 %)

\$ 1,272.70

TOTAL AMOUNT EARNED TO DATE

\$ 11,454.38

Less Previous Payments

\$ 00.00

AMOUNT DUE THIS PAYMENT

\$ 11,454.38

Less 1% Tax

\$ 114.54

TOTAL DUE CONTRACTOR

\$ 11,339.84

I certify that this claim is correct and just in all respects and that payment or credit has not been received.

APPROVED BY:

~~Sub Construction~~ DeBuff Drilling Co. Inc
Contractor

Dept. of State Lands, Abandoned Mine Reclamation
Bureau

Owner

By M2 DeBuff

Date 1-12-93

RECOMMENDED BY:

Chen-Northern, Inc.

Engineer

By Jeremiah B. Bowser

Date 1/13/93

RESP. CNTR. <u>30126</u>
OBJ. EXP. <u>2121</u>
APPROVAL <u>Vic R Andersen</u>
DATE <u>1-20-93</u>

ORIGINAL CONTRACT WORK COMPLETED

Item No.	Description	Contract Quantity	Contract Unit Price	Previous Quantity Requested	Current Quantity Completed	Total Quantity Completed To Date	Total Contract Amount Completed to Date	Amount Due this Payment
1.	Mobilization, Bonding and Insurance	1	5,000.00					
2.	Debris Cleanup	1	5,000.00					
3.	Adit and Shaft Closure - Backfill Closure	3,645	5.00					
4.	Adit and Shaft Seal - Blast or Hand Seal	18	500.00					
5.	Adit Culvert	20	1,750.00					
6.	Adit Door	1	1,200.00					
7.	Steel Grate Shaft Systems - Specialty Grate	1	3,000.00					
8.	Concrete Cone Shaft Closure	1	12,000.00					
9.	Install Owner Provided Signs	14	100.00					
10.	Fertilizing, Seeding and Mulching	1	1,000.00					
11.	Farm Fence	200	3.00					
	Materials on Site (Attach Schedule)	--	--	\$	\$12,727.08	————— >	\$12,727.08	\$12,727.08
CHANGE ORDER TOTAL							\$12,727.08	\$12,727.08

[Faint, illegible handwritten notes and stamps in the bottom left corner.]

PAYMENT REQUEST NO. 2

FROM 11/1/93 TO 6-17-93

PROJECT TITLE: Judith Mountain Reclamation Project

LOCATION: Fergus County, Montana MONT A/E or DSL-AMRB: 92-006

NAME OF CONTRACTOR: DeBuff Drilling Company, Inc.

ADDRESS: Gilt Edge Route, Lewistown, MT 59457

SUMMARY OF PROJECT STATUS

Amount of Original Contract

\$91,425.00

Change Order No. 1

\$ -2,854.00

Change Order No. 2

\$ 5.00

Change Order No. _____

\$ _____

Amount of Approved Change Order(s)

\$ -2,849.00

TOTAL CONTRACT AMOUNT

\$ \$88,576.00

Pay Request No.	Amount of Request
1	\$11,454.38
2	\$77,121.62

Total Contract Amount Completed to Date

\$ 88,576.00

Less Retainage (10 %)

\$ 0.00

TOTAL AMOUNT EARNED TO DATE

\$ 88,576.00

Less Previous Payments

\$ 11,454.38

AMOUNT DUE THIS PAYMENT

\$ 77,121.62

Less 1% Tax

\$ 771.22

TOTAL DUE CONTRACTOR

\$ 76,350.40

I certify that this claim is correct and just in all respects and that payment or credit has not been received.

APPROVED BY:

DeBuff Drilling, Inc.

Contractor

Dept. of State Lands, Abandoned Mine Reclamation

Bureau

Owner

By M2 DeBuff

Date 7-23-93

By _____

Date _____

RECOMMENDED BY:

Chen-Northern, Inc.

Engineer

By Jeremiah B. Bousier

Date 7/27/93

RESP. CNTR.	<u>30126</u>
OBJ. EXP.	<u>2121</u>
APPROVAL	<u>Uki R. Anderson</u>
DATE	<u>7-29-93</u>

ORIGINAL CONTRACT AND CHANGE ORDER WORK COMPLETED

Item No.	Description	Contract Quantity	Contract Unit Price	Previous Quantity Requested	Current Quantity Completed	Total Quantity Completed To Date	Total Contract Amount Completed to Date	Amount Due this Payment
1.	Mobilization, Bonding and Insurance	1	5,000.00	0.00			5,000.00	5,000.00
2.	Debris Cleanup	1	5,000.00	0.00			5,000.00	5,000.00
3.	Adit and Shaft Closure - Backfill Closure	3,645	5.00	0.00	4526	4526	22,6300.00	22,630.00
4.	Adit and Shaft Seal - Blast or Hand Seal	18	500.00	0.00	14	14	7,000.00	7,000.00
5.	Adit Culvert	20	1,750.00	0.00	16	16	28,000.00	28,000.00
6.	Aidt Door	1	1,200.00	0.00	1	1	1,200.00	1,200.00
7.	Steel Grate Shaft Systems - Specialty Grate	1	3,000.00	0.00	1	1	3,000.00	3,000.00
8.	Concrete Cone Shaft Closure	1	12,000.00	0.00	1	1	12,000.00	12,000.00
9.	Install Owner Provided Signs	14	100.00	0.00	15	15	1,500.00	1,500.00
10.	Fertilizng, Seeding and Mulching	1	1,000.00	0.00	1	1	1,000.00	1,000.00
11.	Farm Fence	200	3.00	0.00	200	200	600.00	600.00
12.	Equipment Use		75.00	0.00	6	6	450.00	450.00
	Materials; Change Order No. 1; item No. 1, 2, and 3	--	--	0.00	\$1,196.00	— >	\$1,196.00	\$1,196.00
TOTAL							\$88,576.08	\$88,576.00

CERTIFICATE OF SUBSTANTIAL COMPLETION

TO: State of Montana Department of State Lands OWNER

PROJECT TITLE: Judith Mountain Reclamation Project

MONT A/E or DSL-AMRB: 92-006

SUBSTANTIAL COMPLETION DATE: 6-4-93

CONTRACT DATE: September 28, 1992

DSL INSPECTION DATE: 6-17-93

LOCATION: Fergus County, MT

ENGINEER: Chen-Northern, Inc.

PROJECT OR PART SHALL INCLUDE: _____

PERFORMANCE BOND NO: _____

Reclamation of hazardous mine
openings

DATE OF BOND: _____

CONTRACTOR: Debuff Drilling, Inc.

SURETY: Transamerica Premier Insurance

ADDRESS: Gilt Edge Route

MONTANA AGENT: Flynn Insurance Agency

Lewistown, MT 59457

ADDRESS: P.O. Box 711

TELEPHONE NO: (406) 538-8469

Great Falls, MT 59403

The Work performed under this Contract has been inspected by authorized representatives of the Owner, Contractor, and Engineer, and the Project (or specified part of the Project, as indicated above) is hereby declared to be substantially completed on the above date.

DEFINITION OF SUBSTANTIAL COMPLETION

The date of substantial completion of a project or specified area of a project is the date when the construction is sufficiently completed, in accordance with the contract documents, as modified by any change orders agreed to by the parties, so the Owner can occupy or utilize the project or specified area of the project for the use for which it was intended.

A tentative list of items to be completed is appended hereto. This list may not be exhaustive, and the failure to include an item on it does not alter the responsibility of the Contractor to complete all the Work in accordance with the Contract Documents.

ENGINEER: Chen-Northern, Inc.

By Jennifer B. Bowser 7/27/93
Authorized Representative Date

The Contractor accepts the above Certificate of Substantial Completion and agrees to complete and correct the items on the tentative list within the time indicated.

CONTRACTOR: Debuff Drilling, Inc.

By M. J. DeBuff 7-23-93
Authorized Representative Date

The Owner accepts the Project or specified area of the Project as substantially complete and will assume full possession of the project or specified area at _____ (time), on _____ (date). The responsibility for heat, utilities, security, and insurance under the Contract Documents shall be as set forth under "Remarks" below.

OWNER: State of Montana, Department of State Lands

By Vic R. Adams 7/29/93
Authorized Representative Date

Remarks: (Attach additional sheet, if necessary)

CONTRACTOR'S CERTIFICATE OF COMPLETION

TO (Owner): State of Montana

DATE: 7-23-93

Department of State Lands

PROJECT TITLE: Judith Mountain Reclamation

1625 11th Ave. Capitol Station

Helena, MT 59620

MONT A/E or DSL-AMRB: 92-006

ATTN: Engineer Joel Chavez

CONTRACT DATE: September 28, 1992

FROM: Debuff Drilling, Inc.

(Firm or Corporation)

This is to certify that I, Marvin DeBuff, am an authorized official of DeBuff Drilling Co. Inc., working in the capacity of president and have been properly authorized by said firm or corporation to sign the following statements pertaining to the subject contract:

I know of my own personal knowledge, and do hereby certify, that the work of the contract described above has been performed, and materials used and installed in every particular, in accordance with, and in conformity to, the Contract Plans and Specifications.

The contract work is now complete in all parts and requirements and ready for your substantial completion inspection.

I understand that neither the determination of the Engineer that the work is complete nor the acceptance thereof by the Owner shall operate as a bar to claim against the Contractor under the terms of the guarantee provisions of the Contract Documents.

CONTRACTOR: MJ DeBuff Drilling Co. Inc.

By: MJ DeBuff
Title

Distribution: 1. Project Manager
2. Field Office
3. File

CERTIFICATE OF ACCEPTANCE

TO: State of Montana Department of State Lands OWNER

PROJECT TITLE: Judith Mountain Reclamation Project

MONT A/E or DSL-AMRB: 92-006

CONTRACT DATE: September 28, 1992

LOCATION: Fergus County, MT

FINAL ACCEPTANCE DATE: _____

DSL INSPECTION DATE: 6-17-93

ENGINEER: Chen-Northern

PROJECT OR PART SHALL INCLUDE: _____

Reclamation of hazardous mine openings

PERFORMANCE BOND NO: _____

DATE OF BOND: _____

SURETY: Transamerica Premier Insurance

MONTANA AGENT: Flynn Insurance Agency

CONTRACTOR: Debuff Drilling, Inc.

ADDRESS: Gilt Edge Route

Lewistown, MT 59457

TELEPHONE NO: (406) 538-8469

ADDRESS: P.O. Box 711

Great Falls, MT 59403

The Work performed under this Contract has been inspected by authorized representatives of the Owner, Contractor, and Engineer, and the Project (or specified part of the Project, as indicated above) is hereby declared to be totally completed and accepted on the above date.

ENGINEER: Chen-Northern, Inc.

By Jeremiah B. Brower 7/27/93
Authorized Representative Date

The Contractor accepts the above Certificate of Acceptance and agrees to abide by the conditions of the one-year warranty period which began on the substantial completion date.

CONTRACTOR: DeBuff Drilling, Inc.

By MJ DeBuff 7-23-93
Authorized Representative Date

The Owner accepts the Project as totally complete, and final payment is due to the Contractor as provided in the contract documents.

OWNER: State of Montana Department of State Lands

By Vin R. Anderson 7/29/93
Authorized Representative Date

AFFIDAVIT ON BEHALF OF CONTRACTOR

STATE OF Montana)
) : ss
COUNTY OF Fergus)

MONT A/E or DSL-AMRB: 92-006

DATE: 7-23-93

I certify to the best of my knowledge and belief that all work has been performed and materials supplied in strict conformance with the terms and conditions of the corresponding contract documents between Montana Department of State Lands, the Owner, and Debuff Drilling, the Contractor, dated September 28, 1992 for the Judith Mountain Reclamation Project, Mont A/E or DSL-AMRB 92-006, and further declare that all bills for materials, supplies, utilities, and for all other things furnished or caused to be furnished by the above-named Contractor and used in the execution of the above Contract have been fully paid, and there are no unpaid claims or demands of State Agencies, subcontractors, materialmen, mechanics, laborers or any others resulting from or arising out of work done or ordered to be done by said Contractor under the above-identified Contract.

In consideration of the prior and final payments made and all payments made for authorized changes, the Contractor releases and forever discharges the Owner from any and all obligations and liabilities arising by virtue of said Contract and authorized changes between the parties hereto, either verbal or in writing, and any and all claims and demands of every kind and character whatsoever against the Owner, arising out of or in any way relating to said Contract, and authorized changes.

This statement is made for the purpose of inducing the Owner to make Final Payment under the terms of the Contract, relying on the truth and statements contained therein.

Dated this 23 day of July, 1993, at Lewistown, Montana.

CONTRACTOR: Debuff Drilling, Inc.

By: M J DeBuff
Title: president

Subscribed and sworn to before me this 23rd day of July, 1993

(SEAL)

Richard E. Jorgensen
Notary Public for the State of Montana
Residing at Lewistown
My commission expires 2-12-94

APPENDIX F

**PROJECT RECONCILIATION
JUDITH MOUNTAIN RECLAMATION PROJECT**

PROJECT RECONCILIATION
JUDITH MOUNTAIN RECLAMATION PROJECT

Site Name	HMO No	Specified Task	Quantity	Constructed	Quantity	Constructed	Quantity	Actual Cost
Arnell Creek #1								
	43-1	Adit Seal	1	Adit Seal	1			500.00
	43-2	Adit Seal	1	Adit Seal	1			500.00
Black Bull								
	26-1	Signs	1	Signs	1			100.00
	26-3	Signs	2	Signs	2			200.00
Crystal Cave								
	96-1	Adit Seal	1	Adit Seal	1			500.00
	96-2	Adit Seal	1	Adit Seal	1			500.00
Devil's Canyon #1								
	38-1	Culvert (3')	1	Culvert (3')	1			1,750.00
E Fk Arnell #2								
	45-1	Culvert (3')	1	Culvert (3')	1			1,750.00
East Fork #4								
	68-1	Culvert (3')	1	Adit Closure	20			100.00
East Fork #5								
	67-1	Culvert (3')	1	Adit Closure	20			100.00
	67-2	Culvert (3')	1	Adit Closure	20			100.00
East Fork #6								
	69-2	Culvert (3')	1	Culvert (3')	1			1,750.00
Gilt Edge								
	7-3	Concrete plug	1	Concrete Plug	1	Fence & Signs(3)	200	12,900.00
Lower New Year								
	33-1	Shaft Closure	750	Shaft Closure	465			2,325.00
	33-2	Shaft Closure	750	Shaft Closure	765			3,825.00

PROJECT RECONCILIATION
JUDITH MOUNTAIN RECLAMATION PROJECT

Site Name	HMO No	Specified Task	Quantity	Constructed	Quantity	Constructed	Quantity	Actual Cost
Lower New Year								
	33-3	Culvert (4')	1	Culvert (4')	1			1,750.00
	33-4	Culvert (4')	1	Culvert (4')	1			1,750.00
	33-5	Adit Seal	1	Adit Seal	1			500.00
Moonlight								
	98-1	Shaft Closure	450	Shaft Closure	250			1,250.00
	98-2	Adit Closure	15	Adit Closure	15			75.00
New Year								
	32-1	Shaft Closure	300	Shaft Closure	300			1,500.00
	32-2	Shaft Closure	225	Shaft Closure	225			1,125.00
	32-3	Adit Seal	1	Adit Seal	1			500.00
	32-4	Culvert (4')	1	Culvert (4')	1			1,750.00
	32-5	Adit Seal	1	Adit Seal	1			500.00
	32-6	Shaft Seal	1	Shaft Seal	1			500.00
New Year Gulch East #3								
	99-1	Shaft Closure	75	Shaft Closure	75			375.00
	99-2	Adit Seal	1	Adit Closure	125			625.00
	99-4	Shaft Closure	25	Shaft Closure	25			125.00
New Year Gulch Mine								
	35-1	Adit Closure	15	Adit Closure	100			500.00

Site Name	HMO No	Specified Task	Quantity	Constructed	Quantity	Constructed	Quantity	Actual Cost
New Year Gulch Mine	35-2	Shaft Closure	15	Shaft Closure	25			125.00
	35-3	Adit Closure	15	Adit Closure	26			130.00
	35-4	Adit Closure	15	Adit Closure	25			125.00
	35-5	Adit Closure	15	Adit Closure	25			125.00
New Year Subsidence	34-1	Signs	4	Signs	4			400.00
	34-2	Adit Seal	1	Adit Seal	1	Equipment Use	2	620.00
	34-3	Shaft Closure	400	Shaft Closure	400	Equipment Use	2	2,120.00
	34-4	Adit Seal	1	Adit Seal	1			500.00
	34-5	Shaft Closure	500	Shaft Closure	700	Equipment Use	2	3,620.00
	34-6	Adit Seal	1	Adit Seal	1			500.00
	34-7			Shaft Closure				0.00
Red Mountain								
	71-2	Adit Seal	1	Adit Seal	1			500.00
	71-3	Shaft Seal	1	Shaft Seal	1			500.00
Ruby Gulch								
	41-1	Adit Seal	1	Dropped				0.00
Upper New Year								
	95-1	Grate (16x16)	1	Grate (16x16)	1			3,000.00

PROJECT RECONCILIATION
JUDITH MOUNTAIN RECLAMATION PROJECT

Site Name	HMO No	Specified Task	Quantity	Constructed	Quantity	Constructed	Quantity	Actual Cost
Upper 0x Frame Gulch								
	76-1	Shaft Seal	1	Signs	2			200.00
	76-2	Signs	2	Signs	2			200.00
Virgin Gulch #1								
	75-1	Culvert (3')	1	Culvert (3')	1			1,750.00
Virgin Gulch #2								
	93-1	Gate	1	Adit Gate	1			1,200.00
	93-2	Culvert (4')	1	Culvert (4')	1			1,750.00
War Eagle								
	3-1	Adit Seal	1	Adit Seal	1			500.00
	3-2	Culvert (3')	1	Culvert (3')	1			1,750.00
	3-3	Culvert (3')	1	Culvert (3')	1			1,750.00
	3-4	Culvert (4')	1	Culvert (4')	1			1,750.00
	3-5	Culvert (4')	1	Culvert (4')	1			1,750.00
	3-6	Culvert (3')	1	Culvert (3')	1			1,750.00
Western Mines #1								
	23-1	Adit Seal	1	Adit Closure	75			375.00
	23-2	Shaft Closure	35	Shaft Closure	65			325.00
	23-3	Shaft Closure	20	Shaft Closure	20			100.00
Western Mines #2								
	29-1	Culvert (4')	1	Culvert (4')	1			1,750.00

APPENDIX G

**PHOTOGRAPHIC RECORD
JUDITH MOUNTAIN RECLAMATION PROJECT**

PHOTOGRAPHIC RECORD
JUDITH MOUNTAIN RECLAMATION PROJECT

SLIDE NO.	SITE NAME	PA NO.	MINE OPENING NO.	SEQUENCE, VANTAGE POINT & DESCRIPTION
1	War Eagle	14-003	3-1	BEFORE; 30' SE OF SUBSIDENCE
2	War Eagle	14-003	3-1	AFTER BLAST; 40' SE OF SUBSIDENCE
3	War Eagle	14-003	3-2	BEFORE; 25' NW OF ADIT
4	War Eagle	14-003	3-2	DURING; 25' NW OF ADIT
5	War Eagle	14-003	3-2	AFTER; 25' NW OF ADIT
6	War Eagle	14-003	3-3	BEFORE; 20' W OF ADIT
7	War Eagle	14-003	3-3	DURING; 25' W OF ADIT
8	War Eagle	14-003	3-3	AFTER; 25' W OF ADIT
9	War Eagle	14-003	3-4	BEFORE; 10' W OF ADIT
10	War Eagle	14-003	3-4	DURING; 30' W OF ADIT
11	War Eagle	14-003	3-4	AFTER; 20' W OF ADIT
12	War Eagle	14-003	3-5	BEFORE; 10' W OF ADIT
13	War Eagle	14-003	3-5	DURING; 25' NW OF ADIT
14	War Eagle	14-003	3-5	AFTER; 25' NW OF ADIT
15	War Eagle	14-003	3-6	BEFORE; 10' W OF ADIT
16	War Eagle	14-003	3-6	DURING; 50' W OF ADIT
17	War Eagle	14-003	3-6	AFTER; 20' W OF ADIT
18	Gilt Edge	14-007	7-3	BEFORE; 40' SE OF STOPE
19	Gilt Edge	14-007	7-3	BEFORE; AT EDGE OF STOPE OF STOPE
20	Gilt Edge	14-007	7-3	DURING; PREPARING TO INSTALL PLUG
20	Gilt Edge	14-007	7-3	DURING; PLACING CONE
20	Gilt Edge	14-007	7-3	DURING; 30' SE OF SUBSIDENCE
20	Gilt Edge	14-007	7-3	DURING; SW FENCE CORNER
24	Gilt Edge	14-007	7-3	AFTER; N EDGE, CONE PLACED
25	Gilt Edge	14-007	7-3	AFTER; 50' SE OF FENCE
26	Western Mines #1	14-023	23-1	BEFORE; 500' SW OF OPENING
27	Western Mines #1	14-023	23-1	BEFORE; 50' S OF ADIT
28	Western Mines #1	14-023	23-1	DURING; 25' N OF ADIT
29	Western Mines #1	14-023	23-1	AFTER; 25' N OF ADIT
30	Western Mines #1	14-023	23-2	BEFORE; 15' N OF SHAFT
31	Western Mines #1	14-023	23-2	AFTER; 25' NE OF SHAFT
32	Western Mines #1	14-023	23-3	BEFORE; 15' W OF SHAFT

PHOTOGRAPHIC RECORD
JUDITH MOUNTAIN RECLAMATION PROJECT

SLIDE NO.	SITE NAME	PA NO.	MINE OPENING NO.	SEQUENCE, VANTAGE POINT & DESCRIPTION
33	Western Mines #1	14-023	23-3	DURING; 15' W OF SHAFT
34	Western Mines #1	14-023	23-3	AFTER; 15' W OF SHAFT
35	Black Bull	14-026	26-1	DURING; 20' NW OF SHAFT
36	Black Bull	14-026	26-1	AFTER; 20' NW OF SHAFT
37	Black Bull	14-026	26-2	DURING; 25' SE OF HIGHWALL
38	Black Bull	14-026	26-3	DURING; 25' SE OF ADIT
39	Black Bull	14-026	26-3	AFTER; 50' SE OF ADIT
40	Western Mines #2	14-029	29-1	BEFORE; 25' N OF ADIT
41	Western Mines #2	14-029	29-1	DURING; 25' NE OF ADIT
42	Western Mines #2	14-029	29-1	AFTER; 25' N OF ADIT
43	Western Mines #3	14-030	30-2	BEFORE; 25' N OF ADIT
44	Western Mines #3	14-030	30-2	DURING; 25' NE OF ADIT
45	Western Mines #3	14-030	30-2	AFTER; 25' NE OF ADIT
46	Western Mines #3	14-030	30-3	BEFORE; 10' NE OF SHAFT
47	Western Mines #3	14-030	30-3	AFTER; 10' NE OF SHAFT
48	Western Mines #3	14-030	30-4	BEFORE; 25' NE OF ADIT
49	Western Mines #3	14-030	30-4	AFTER; 25' NE OF ADIT
50	Western Mines #4	14-031	31-1	BEFORE; 30' S OF ADIT
51	Western Mines #4	14-031	31-1	DURING; 25' N OF ADIT
52	Western Mines #4	14-031	31-1	AFTER; 25' N OF ADIT
53	New Year	14-032	32-1	BEFORE; 15' NE OF SHAFT
54	New Year	14-032	32-1	BEFORE; 75' W OF SHAFTS 1 & 2
55	New Year	14-032	32-1	AFTER; 75' W OF SHAFTS 1 & 2
56	New Year	14-032	32-1	AFTER; 15' NE OF SHAFT
57	New Year	14-032	32-2	BEFORE; 15' S OF ADIT
58	New Year	14-032	32-2	DURING; PLACING BACKFILL
59	New Year	14-032	32-2	AFTER; 15' S OF ADIT
60	New Year	14-032	32-3	BEFORE; 20' N OF ADIT
61	New Year	14-032	32-3	AFTER; 15' N OF ADIT
62	New Year	14-032	32-4	BEFORE; 15' E OF ADIT
63	New Year	14-032	32-4	AFTER; 30' E OF ADIT
64	New Year	14-032	32-5	BEFORE; 15' NE OF ADIT

PHOTOGRAPHIC RECORD
JUDITH MOUNTAIN RECLAMATION PROJECT

SLIDE NO.	SITE NAME	PA NO.	MINE OPENING NO.	SEQUENCE, VANTAGE POINT & DESCRIPTION
97	New Year Subsidence	14-034	34-6	BEFORE; 30' S OF ADIT
98	New Year Subsidence	14-034	34-6	AFTER; 30' S OF ADIT
99	New Year Subsidence	14-034	34-7	DURING; 30 NE OF SHAFT
100	New Year Subsidence	14-034	34-7	BEFORE; 20' E OF SHAFT
101	New Year Subsidence	14-034	34-7	BEFORE; LOOKING DOWN SHAFT
102	New Year Subsidence	14-034	34-7	AFTER; 30' N OF SHAFT
103	New Year Gulch Mine	14-035	35-1	BEFORE; 25' N OF ADIT
104	New Year Gulch Mine	14-035	35-1	DURING; 25' N OF ADIT
105	New Year Gulch Mine	14-035	35-1	AFTER; 30' N OF ADIT
106	New Year Gulch Mine	14-035	35-2	BEFORE; 25' W OF SHAFT
107	New Year Gulch Mine	14-035	35-2	DURING; 25' W OF SHAFT
108	New Year Gulch Mine	14-035	35-2	AFTER; 25' W OF SHAFT
109	New Year Gulch Mine	14-035	35-3	BEFORE; 25' E OF ADIT
110	New Year Gulch Mine	14-035	35-3	AFTER; 25' E OF ADIT
111	New Year Gulch Mine	14-035	35-4	BEFORE; 25' E OF ADIT
112	New Year Gulch Mine	14-035	35-4	AFTER; 25' E OF ADIT
113	New Year Gulch Mine	14-035	35-5	BEFORE; 20' E OF ADIT
114	New Year Gulch Mine	14-035	35-5	AFTER; 80' S OF ADITS 4 & 5
115	Devils Canyon #1	14-038	38-1	AFTER; 20' W OF ADIT
116	Devils Canyon #1	14-038	38-1	BEFORE; 10' W OF ADIT
117	Devils Canyon #1	14-038	38-1	DURING; 15' W OF ADIT
118	Armell Creek #1	14-043	43-1	BEFORE; 10' W OF ADIT
119	Armell Creek #1	14-043	43-1	AFTER; 10' W OF ADIT
120	Armell Creek #1	14-043	43-2	BEFORE; 10' W OF ADIT
121	Armell Creek #1	14-043	43-2	AFTER; 25' W OF ADIT
122	Armell Creek #1	14-043	43-2	DURING; 25' W OF ADIT, REMOVING TIMBERS
123	E Fk Armell #2	14-045	45-1	BEFORE; 20' N OF ADIT
124	E Fk Armell #2	14-045	45-1	BEFORE; 10' N OF ADIT
125	E Fk Armell #2	14-045	45-1	DURING; 30' N OF ADIT, REMOVING BOARDS
126	E Fk Armell #2	14-045	45-1	AFTER; 30' N OF ADIT
127	East Fork #5	14-067	67-1	BEFORE; 25' W OF ADIT
128	East Fork #5	14-067	67-1	DURING; 25' W OF ADIT

PHOTOGRAPHIC RECORD
JUDITH MOUNTAIN RECLAMATION PROJECT

SLIDE NO.	SITE NAME	PA NO.	MINE OPENING NO.	SEQUENCE, VANTAGE POINT & DESCRIPTION
129	East Fork #5	14-067	67-1	AFTER; 25' W OF ADIT
130	East Fork #5	14-067	67-2	BEFORE; 25' W OF ADIT
131	East Fork #5	14-067	67-2	DURING; 25' W OF ADIT
132	East Fork #5	14-067	67-2	AFTER; 25' W OF ADIT
133	East Fork #4	14-068	68-1	BEFORE; 20' W OF ADIT
134	East Fork #4	14-068	68-1	DURING; 30' W OF ADIT
135	East Fork #4	14-068	68-1	AFTER; 30' W OF ADIT
136	East Fork #6	14-069	69-2	DURING; 30' E OF ADIT
137	East Fork #6	14-069	69-2	AFTER; 30' E OF ADIT
138	East Fork #6	14-069	69-2	BEFORE; 50' E OF ADIT
139	Red Mountain	14-071	71-1	DURING; 25' E OF ADIT/SHAFT, BLAST PREP
140	Red Mountain	14-071	71-1	BEFORE; 20' E OF ADIT/SHAFT
141	Red Mountain	14-071	71-1	DURING; 20' E OF ADIT/SHAFT
142	Red Mountain	14-071	71-1	AFTER; 25' E OF SEALED ADIT/SHAFT
143	Virgin Gulch #1	14-075	75-1	BEFORE; 50' NE OF INCL. ADIT
144	Virgin Gulch #1	14-075	75-1	BEFORE; 20' NE OF INCL. ADIT
145	Virgin Gulch #1	14-075	75-1	DURING; 50' NE OF INCL. ADIT
146	Virgin Gulch #1	14-075	75-1	AFTER; 50' NE OF INCL. ADIT
147	Upper Ox Frame Gulch	14-076	76-1	BEFORE; E EDGE OF SHAFT
147	Upper Ox Frame Gulch	14-076	76-1	BEFORE; E EDGE OF SHAFT
147	Upper Ox Frame Gulch	14-076	76-1	AFTER; W SIDE OF SHAFT
150	Upper Ox Frame Gulch	14-076	76-2	AFTER; S END OF LOWER SUBSIDENCE
151	Virgin Gulch #2	14-093	93-1	BEFORE; 40' SE OF ADIT
152	Virgin Gulch #2	14-093	93-1	BEFORE; 20' SE OF ADIT
153	Virgin Gulch #2	14-093	93-1	AFTER; 40' SE OF ADIT
154	Virgin Gulch #2	14-093	93-2	BEFORE; 25' NE OF ADIT
155	Virgin Gulch #2	14-093	93-2	DURING; 50' SW OF ADIT
156	Virgin Gulch #2	14-093	93-2	DURING; 25' NE OF ADIT
157	Virgin Gulch #2	14-093	93-2	AFTER; 25' NE OF ADIT
158	Upper New Year	14-095	95-1	BEFORE; 25' E OF SHAFT
159	Upper New Year	14-095	95-1	DURING; 20' E OF SHAFT
160	Upper New Year	14-095	95-1	DURING; 75' OF SHAFT, LOWERING 1ST GRATE

PHOTOGRAPHIC RECORD
JUDITH MOUNTAIN RECLAMATION PROJECT

SLIDE NO.	SITE NAME	PA NO.	MINE OPENING NO.	SEQUENCE, VANTAGE POINT & DESCRIPTION
161	Upper New Year	14-095	95-1	DURING; 75' S OF SHAFT, 2ND GRATE SECT.
162	Upper New Year	14-095	95-1	AFTER; 30' S OF SHAFT
163	Crystal Cave	14-096	96-1	BEFORE; 20' W OF ADIT
164	Crystal Cave	14-096	96-1	DURING; 20' W OF ADIT
165	Crystal Cave	14-096	96-1	AFTER; 20' W OF ADIT
166	Crystal Cave	14-096	96-2	BEFORE; 20' W OF ADIT
167	Crystal Cave	14-096	96-2	DURING; 20' W OF ADIT
168	Crystal Cave	14-096	96-2	AFTER; 20' W OF ADIT
169	Moonlight	14-098	98-1	BEFORE; 10' NE OF SHAFT
170	Moonlight	14-098	98-1	DURING; 20' NE OF SHAFT
171	Moonlight	14-098	98-1	AFTER; 10' NE OF SHAFT
172	Moonlight	14-098	98-2	BEFORE; 20' NE OF ADIT
173	Moonlight	14-098	98-2	DURING; 30' NE OF ADIT
174	Moonlight	14-098	98-2	AFTER; 20' NE OF ADIT
175	New Year Gulch East #3	14-099	99-1	BEFORE; 20' N OF SHAFT
176	New Year Gulch East #3	14-099	99-1	DURING; 20' N OF SHAFT
177	New Year Gulch East #3	14-099	99-2	BEFORE; 20' W OF ADIT
178	New Year Gulch East #3	14-099	99-2	DURING; 50' W OF ADIT
179	New Year Gulch East #3	14-099	99-4	BEFORE; 20' E OF SHAFT

